# Specifications For Roof Repairs

# Greenfield Middle School 195 Federal Street Greenfield, MA

Prepared for:

City of Greenfield 14 Court Square Greenfield, MA

Prepared by:

Structural Support & Design Services 236 S. Shirkshire Rd. Conway, MA

June 1, 2011

### DOCUMENT 00 01 10

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### **DOCUMENT 00 21 13**

### INSTRUCTIONS TO BIDDERS

### 1.1 SUMMARY

### A. Document Includes:

- 1. Prevailing Wage.
- 2. Bid submission.
- 3. Intent.
- 4. Work identified in contract documents.
- 5. Contract Time.
- 6. Definitions.
- 7. Contract Documents identification.
- 8. Availability of documents.
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- 10. Inquiries and Addenda.
- 11. Product substitutions.
- 12. Prebid conference.
- 13. Bidder qualifications.
- 14. Bidder prequalification.
- 15. Subcontractors.
- 16. Submission procedure.
- 17. Bid ineligibility.
- 18. Security deposit.
- 19. Performance Assurance.
- 20. Insurance.
- 21. Bid Form requirements.
- 22. Fees for changes in the Work.
- 23. Bid Form signature.
- 24. Additional Bid information.
- 25. Selection and award of alternates.
- 26. Bid opening.
- 27. Duration of offer.
- 28. Acceptance of offer.

### B. Related Documents:

- 1. Document 00 41 13 Bid Form Stipulated Sum (Single-Prime Contract)
- 2. Document 00 43 00 Procurement Form Supplements: Appendices A and B.
- 3. Document 00 73 13 Supplementary Conditions AIA

### 1.1 PREVAILING WAGE

- C. The Massachusetts prevailing wage rates are applicable to this project.
  - 1. The "Prevailing Wage Rates" schedule is attached to this section.
  - 2. The contractor is instructed to post the "Notice to contractors' and the wage schedule.
  - 3. The contractor is instructed to submit weekly, the following documents:

- a. The "Weekly Payroll Records Report" form, attached to this section.
- b. The "Massachusetts Weekly Certified Payroll Report Form," attached to this section.

### 1.2 BID SUBMISSION

- A. Bidders are instructed to submit their bids per the requirements in the advertisement for bids.
- B. Bids submitted after the specified time will be returned to Bidder unopened.
- C. Amendments to submitted Bids will be permitted when received in writing prior to bid closing and when endorsed by the same party or parties who signed and sealed the Bid.
- D. Bidders may withdraw their Bid by written request at any time before bid closing.

### 1.3 INTENT

A. The intent of this Bid request is to obtain an offer to perform work to complete Roof Repairs located at The Greenfield Middle School, 195 Federal Street, Greenfield, MA for a Stipulated Sum contract, in accordance with Contract Documents.

### 1.4 WORK IDENTIFIED IN CONTRACT DOCUMENTS

- A. The drawings indicate the areas where the roof has been marked for treatment as follows:
  - 1. Tear-off. Tear-off areas are to be stripped of the existing roofing materials, and rigid insulation. The concrete deck is to be prepared for new rigid insulation and a new membrane is to be installed along with all necessary flashing, coping, and sealants as required to create a watertight roof.
- B. Other work depicted on the drawings includes:
  - 1. One new drain is to be installed where indicated on the drawings.
  - 2. A steel channel is to be installed to support the existing deck at the drain where indicated on the drawings.
  - 3. Provide and install two walkthrough ladders where indicated on the drawings.
  - 3. Miscellaneous. The drawings depict several specific areas where sealing of the existing walls and ductwork is indicated.
- C. Include in the bid the cost of providing and installing 300 walkway pads in locations to be determined, see unit pricing for additional pads.
- D. Furnish 15 year manufacturer's warranty, see alternate for 20 year warranty.

### 1.5 CONTRACT TIME

A. The work should start as soon as possible after July 1, 2011. Complete the work on or before August 26, 2011.

### 1.6 DEFINITIONS

- A. Bidding Documents: Contract Documents supplemented with Advertisement for Bids, Instructions to Bidders, Bid Form, Bid Form Supplements and Appendices, and bid securities, identified.
- B. Contract Documents: Defined in AIA Document A201-2007 (General Conditions of the Contract) Article 1, including issued Addenda.
- C. Bid: Executed Bid Form and required attachments submitted in accordance with these Instructions to Bidders.
- D. Bid Sum: Monetary sum identified by the Bidder in the Bid Form.

### 1.7 CONTRACT DOCUMENTS IDENTIFICATION

A. The Contract Documents are identified as Roof Repairs to Greenfield Middle School as prepared by Structural Support & Design Services, 236 S. Shirkshire Road., Conway, MA and identified in the Table of Contents.

### 1.8 AVAILABILITY OF DOCUMENTS

- A. Bidding Documents may be obtained as stated in Advertisement for Bids.
- B. One set of bid documents can be obtained by general contract bidders free of charge.
- C. Bidding documents are made available only for the purpose of obtaining offers for this project. Their use does not grant a license for other purposes.

### 1.9 EXAMINATION OF DOCUMENTS

- A. Upon receipt of Bidding Documents verify documents are complete. Notify Engineer if documents are incomplete.
- B. Immediately notify Engineer upon finding discrepancies or omissions in Bidding Documents.

### 1.10 INQUIRIES AND ADDENDA

- A. Direct questions in writing to Michael Rainville, at the office of the Engineer; facsimile 413-625-9757.
- B. Verbal answers are not binding on any party.
- C. Submit questions not less than 5 days before date set for receipt of Bids. Replies will be made by Addenda.

D. Addenda may be issued during bidding period. Addenda will be sent to known Bidders. Addenda become part of the Contract Documents. Include resultant costs in the Bid Sum.

### 1.11 PRODUCT SUBSTITUTIONS

- A. Substitute Products will be considered when request is submitted as an attachment to the Bid Form.
- B. With each substitution request, provide sufficient information for the Engineer to determine acceptability of proposed Products.
- C. Provide complete information on required revisions to other Work to accommodate each substitution, the value of additions to or reductions from the Bid Sum, including revisions to other Work.
- D. Provide Products as specified unless substitutions are submitted in this manner and subsequently accepted.
- E. Approval to submit substitution requests prior to submission of Bids is not required.

### 1.12 PREBID CONFERENCE

- A. A Bidders conference will be scheduled as noted in the advertisement for bids.
- B. General contract and major subcontract Bidders are required to attend.
- C. Representatives of the Owner will be in attendance.
- D. Summarized minutes of this meeting will be circulated to known Bidders. These minutes will not form part of Contract Documents.
- E. Information relevant to Bidding Documents will be issued by Addendum.

### 1.13 BIDDER QUALIFICATIONS

A. To demonstrate qualification for performing the Work of this Contract, Bidders may be requested to submit written evidence of financial position, previous experience, and license to perform work in the State of Massachusetts.

### 1.14 BIDDER PREQUALIFICATION

- A. When specifically requested, Complete and submit Qualification Form to the Owner.
- B. Owner will notify Bidders of acceptance or rejection of Bidder's qualifications within 48 hours of Bidder's submittal.

### 1.15 SUBCONTRACTORS

A. The Owner reserves the right to reject a proposed Subcontractor for reasonable cause.

B. Refer to AIA Document A201-2007, General Conditions of the Contract, Article 5 Subcontractors.

### 1.16 SUBMISSION PROCEDURE

- A. Bidders shall be solely responsible for delivery of Bids in manner and time prescribed.
- B. Submit one copy of executed offer on Bid Forms provided, signed with required security deposit in a closed opaque envelope, clearly identified with Bidder's name, Project name, and Owner's name on the outside.
- C. An abstract summary of submitted Bids will be made available to all Bidders following bid opening.

### 1.17 BID INELIGIBILITY

- A. Bids that are unsigned, improperly signed or sealed, conditional, illegible, obscure, contain arithmetical errors, erasures, alterations, or irregularities of any kind, may be declared unacceptable at Owner's discretion.
- B. Bid Forms, Appendices, and enclosures which are improperly prepared may be declared unacceptable at Owner's discretion.
- C. Failure to provide security deposit, bonds or insurance requirements will invalidate the Bid.

### 1.18 SECURITY DEPOSIT

- A. Bids shall be accompanied by security deposit as follows:
  - 1. Bid Bond of a sum no less than 10 percent of the Bid Sum Price on standard surety company form.
- B. Endorse Bid Bond in name of the Owner as obligee, signed and sealed by the principal (Contractor) and surety.
- C. Security deposit of accepted Bidder will be returned after delivery to the Owner of the required Performance and Payment Bonds by the accepted Bidder.
- D. Include the cost of security deposit in the Bid Sum.
- E. After a Bid has been accepted, security deposits will be returned to the respective Bidders.
- F. If no contract is awarded, security deposits will be returned.

### 1.19 PERFORMANCE ASSURANCE

A. Accepted Bidder: Provide a Performance and Payment bond as described in Document 00 73 13, Supplementary Conditions.

B. Include the cost of performance assurance bonds in the Bid Sum and identify the cost when requested by the Owner.

### 1.20 INSURANCE

A. Provide an executed "Undertaking of Insurance" on a standard form provided by the insurance company stating their intention to provide insurance to the Bidder in accordance with the insurance requirements of the Contract Documents.

### 1.21 BID FORM REQUIREMENTS

- A. Complete requested information in the Bid Form and Bid Form Supplements.
- B. Refer to Document 00 73 13, Supplementary Conditions, for inclusion of taxes, procedures for tax rebate claims by the Owner and tax exempt Products.

### 1.22 FEES FOR CHANGES IN THE WORK

A. Include fees for overhead and profit on Bidder's own Work and Work by Subcontractors, identified in Document 00 73 13, Supplementary Conditions.

### 1.23 BID FORM SIGNATURE

- A. Sign Bid Form, as follows:
  - 1. Sole Proprietorship: Signature of sole proprietor in the presence of a witness who will also sign. Insert the words "Sole Proprietor" under the signature.
  - 2. Partnership: Signature of all partners in the presence of a witness who will also sign. Insert the word "Partner" under each signature.
  - 3. Corporation: Signature of a duly authorized signing officer in their normal signature. Insert the officer's capacity in which the signing officer acts, under each signature. If the Bid is signed by officials other than the president and secretary of the company, or the president/secretary/treasurer of the company, submit a copy of the bylaw resolution of their board of directors authorizing them to do so, with the Bid Form in the bid envelope.
  - 4. Joint Venture: Signature of each party of the joint venture under their respective seals in a manner appropriate to such party as described above, similar to requirements for Partnerships.

### 1.24 ADDITIONAL BID INFORMATION

A. Lowest Bidder is required to complete and submit Document 00 43 00, Procurement Form Supplements, within 48 hours of Bid opening.

### 1.25 SELECTION AND AWARD OF ALTERNATES

A. Indicate variation of Bid Sum for alternates listed in Document 00 43 00, Procurement Form Supplements. This form requests a "difference" in Bid Sum by adding to or deducting from base Bid Sum.

B. Bids will be evaluated on total of base Bid Sum Price with full consideration of alternates.

### 1.26 BID OPENING

A. Bids will be opened publicly when specified in the advertisement for bids.

### 1.27 DURATION OF OFFER

A. Bids shall remain open to acceptance and shall be irrevocable for a period of 60 days after bid closing date.

### 1.28 ACCEPTANCE OF OFFER

- A. The Owner reserves the right to accept or reject any or all offers.
- B. Once acceptance by the Owner, the Owner will issue to the accepted Bidder a written Notice To Proceed.
- C. Notwithstanding delay in the preparation and execution of the Agreement, accepted Bidder shall be prepared, upon written Notice to Proceed, to commence work within seven days following receipt of official written order of the Owner to proceed, or on date stipulated in such order.
- D. The accepted bidder shall assist and cooperate with the Owner to prepare the Agreement, and within 7 days following its presentation shall execute Agreement and return it to the Owner.

END OF DOCUMENT



### DEPARTMENT OF LABOR STANDARDS

### **Prevailing Wage Rates**

As determined by the Commissioner under the provisions of the Massachusetts General Laws, Chapter 149, Sections 26 to 27H



Awarding Authority: Town of Greenfield

Contract Number: City/Town: GREENFIELD

Description of Work: Middle School Roof Repair Works - Repair to roof of Greenfield Middle School involving some tear-off and some overlay

Job Location: 195 Federal St

Je	b Loc	ation: 195 Fe	deral St										
Classific	tion					Effective Dates and Total Rates							
truction													
(2 AXLE) DR	IVER-	EQUIPMENT				12/01/2010	\$44.270	06/01/2011	\$44.670	08/01/2011	\$45,020		
						12/01/2011	\$45,680	06/01/2012	\$45,980	08/01/2012	\$46,330		
						12/01/2012	\$47.360						
(3 AXLE) DR	IVER-	EQUIPMENT				12/01/2010	\$44,340	06/01/2011	\$44.740	08/01/2011	\$45,090		
						12/01/2011	\$45,750	06/01/2012	\$46,050	08/01/2012	\$46,400		
						12/01/2012	\$47.430						
(4 & 5 AXLE	DRIVE	ER - EQUIPMEN	T			12/01/2010	\$44.460	06/01/2011	\$44.860	08/01/2011	\$45,210		
						12/01/2011	\$45.870	06/01/2012	\$46.170	08/01/2012	\$46,520		
						12/01/2012	\$47.710						
ADS/SUBME	RSIBL	EPILOT				08/01/2010	\$103,680	08/01/2011	\$107.800				
AIR TRACK	OPERA	TOR				12/06/2010	\$41,590	06/06/2011	\$42,590	12/05/2011	\$43,140		
						06/04/2012	\$44.140	12/03/2012	\$45.090				
AIR TRACK	OPERA	TOR (HEAVY &	HIGHWAY)			12/01/2010	\$41,720	06/01/2011	\$42,720	12/01/2011	\$43.970		
ASBESTOS 1	WORKE	R (PIPES & TAN	iKS)			12/01/2009	\$40,250						
ASPHALT R.	AKER					12/06/2010	\$41.090	06/06/2011	\$42,090	12/05/2011	\$42,640		
						06/04/2012	\$43,640	12/03/2012	\$44.590				
ASPHALT R.	AKER (	HEAVY & HIGH	WAY)			12/01/2010	\$41,220	06/01/2011	\$42,220	12/01/2011	\$43,470		
AUTOMATIO	GRAI	DER-EXCAVATO	OR (RECLAIME	(R)		12/01/2010	\$46,640	06/01/2011	\$47.520	12/01/2011	\$48,390		
						06/01/2012	\$49.340	12/01/2012	\$50.290				
BARCO-TYP	EJUM	PING TAMPER				12/06/2010	\$41,090	06/06/2011	\$42,090	12/05/2011	\$42,640		
						06/04/2012	\$43,640	12/03/2012	\$44.590				
BATCH/CEM	ENT P	LANT - ON SITE				12/01/2010	\$46,110	06/01/2011	\$46.990	12/01/2011	\$47.860		
						06/01/2012	\$48,810	12/01/2012	\$49.760				
BLOCK PAV	ER, RA	MMER/CURB	SETTER			12/06/2010	\$41,590	06/06/2011	\$42.590	12/05/2011	\$43.140		
						06/04/2012	\$44.140	12/03/2012	\$45.090				
BLOCK PAV HIGHWAY)	ER, RA	MMER/CURB	SETTER (HEAV	Y &		12/01/2010	\$41.720	06/01/2011	\$42,720	12/01/2011	\$43.970		
BOILER MA	KER					01/01/2010	\$55,850						
APPER	NTICE	BOILBRMAKIB	- Local 29										
Ratio	Simp	1	2	3	4	5	6	7	8				
1:5	%	65.00	65.00	70.00	75.00	80.00	85.00	90.00	95.00				
Apprent	ice wage	shall be no less the	n the following:										
Step 15	12.6 62\$4	266/3944.54/4946.	435 \$48.31/6\$50.2	0/7\$52.08/8\$53.97									
BRICK/STON WATERPRO		TFICIAL MASON	NRY (IN CL. MA	SONRY		03/07/2011	\$57.900	09/05/2011	\$59.250	03/05/2012	\$60,650		
APPER	NTICE	BRICK/PLASTE	E/CEMENT MASK	ON - Local 1 Sprin	gfeld/Ymmfel	d							
Ratio Step 1 2 3						5	6						
1:5 % 50.00 60.00 70.00 80.						90.00	95.00						
Apprent	ice wage	shall be no less the	n the following:										
Step 15	10.8 8254	429/3\$47.69/4\$51.	095 \$54.50/6\$56.2	O .									

This wage schedule must be posted at the work site in accordance with M.G.L. ch. 149, sec. 27

Failure of the employer to pay "prevailing wage rates," which are the minimum wage rates listed above, on public works projects is a violation of M.G.L. ch. 149, sec. 27. Employees not receiving such rates should report the violation to the Office of Fair Labor and Business Practices, 100 Cambridge Street, Boston, MA 02108; Tel: 617-727-3465.

Issue Date: 05/17/2011 Wage Request Number: 20110517-010 Page 1 of 11



### DEPARTMENT OF LABOR STANDARDS

### **Prevailing Wage Rates**

As determined by the Commissioner under the provisions of the Massachusetts General Laws, Chapter 149, Sections 26 to 27H



Awarding Authority: Town of Greenfield

Contract Number: City/Town: GREENFIELD

Description of Work: Middle School Roof Repair Works - Repair to roof of Greenfield Middle School involving some tear-off and some overlay

Job Location: 195 Federal St

Classific	tion					Effective Da	tes and Tota	Rates			
BULLDOZE	POWER	SHOVEL/TRE	EE SHREDDER			12/01/2010	\$46,640	06/01/2011	\$47.520	12/01/2011	\$48,390
		/CLAN	SHELL			06/01/2012	\$49.340	12/01/2012	\$50,290		
CAISSON &	UNDERP	INN ING BOTT	OM MAN			12/01/2010	\$50.250	06/01/2011	\$51,250	12/01/2011	\$52,500
CAISSON &	UNDERP	INNING LABO	ORER			12/01/2010	\$49.100	06/01/2011	\$50,100	12/01/2011	\$51,350
CAISSON &	UNDERP	INNING TOP I	MAN			12/01/2010	\$49.100	06/01/2011	\$50,100	12/01/2011	\$51,350
CARBIDE CO	ORE DRIL	LOPERATOR	1			12/06/2010	\$41,090	06/06/2011	\$42,090	12/05/2011	\$42,640
						06/04/2012	\$43,640	12/03/2012	\$44,590		
CARPENTER	L					04/04/2011	\$48,900	10/03/2011	\$49,650		
A1998.10	NTICE (	CARPENTER - L	ocal 108 Hamp da	Hampshire							
Kato	Step	1	2	3	4	5	6	7	8		
**	%	50.00	60.00	70.00	75.00	80.00	80.00	90.00	90.00		
Pm-6/09	Shep1\$22.5	99/2523.83 (5534.0	04/4536.92/5540.9	1684235		** 1:1-5	/2: 6-85:9-11/Step	sc 6 mos (600 hrs)	rates by step		
7\$44.91	18\$46.34Po	166.09:1\$22.39/2	\$25.26/3\$36.92.AS	38.365&6\$40.91/7	8:8544.91						
CEMENT MA	ASONRY/	PLASTERING				08/07/2011	\$58,050	09/05/2011	\$59,360	03/05/2012	\$60.720
CHAIN SAW	OPERAT	OR				12/06/2010	\$41.090	06/06/2011	\$42.090	12/05/2011	\$42,640
						06/04/2012	\$43,640	12/03/2012	\$44.590		
COMPRESSO	R OPER	ATOR				12/01/2010	\$46.110	06/01/2011	\$46.990	12/01/2011	\$47.860
						06/01/2012	\$48.810	12/01/2012	\$49.760		
CRANE/BAC	KHOE/F	CONT-END LO	ADER OPERA	TOR.		12/01/2010	\$46,640	06/01/2011	\$47.520	12/01/2011	\$48,390
						06/01/2012	\$49.340	12/01/2012	\$50.290		
DELEADER	(BRIDGE	)				01/01/2011	\$64.410	07/01/2011	\$65,410	01/01/2012	\$66,410
						07/01/2012	\$67.410	01/01/2013	\$68,410		
			S - BRIDGES/T/								
Rato	Simp	1	2	3	4	5	6	7	8		
1:1	%	50.00	55.00	60.00	65.00	70.00	75.00	80.00	90.00		
		hall be no less tha				Steps are	750 hrs.				
16000		86/3\$39.01/4\$41.	165 \$51.51/6\$53.6	6/7\$55.81/8\$60.11							
DEMO: ADZ						12/01/2010	\$49.100	06/01/2011	\$50.100	12/01/2011	\$51,350
			ER OPERATO			12/01/2010	\$50,100	06/01/2011	\$51,100	12/01/2011	\$52,350
A 1998.10	NTICE	LABORER Demo	Backhoe/Loaderi	lammer Operator							
Rato	Step	1	2	3	4						
1:5	%	60.00	70.00	80.00	90.00						
Apprent	ice wages d	hall be no less tha	n the following:								
Sup 153	7.482\$40	64/3543.79/4546.	95								
DEMO: BUR	NERS					12/01/2010	\$49.850	06/01/2011	\$50,850	12/01/2011	\$52,100

This wage schedule must be posted at the work site in accordance with M.G.L. ch. 149, sec. 27

Failure of the employer to pay "prevailing wage rates," which are the minimum wage rates listed above, on public works projects is a violation of M.G.L. ch. 149, sec. 27. Employees not receiving such rates should report the violation to the Office of Fair Labor and Business Practices, 100 Cambridge Street, Boston, MA 02108; Tel: 617-727-3465.

Issue Date: 05/17/2011 Wage Request Number: 20110517-010 Page 2 of 11



### DEPARTMENT OF LABOR STANDARDS

### **Prevailing Wage Rates**

As determined by the Commissioner under the provisions of the Massachusetts General Laws, Chapter 149, Sections 26 to 27H



Awarding Authority: Town of Greenfield

Contract Number: City/Town: GREENFIELD

Description of Work: Middle School Roof Repair Works - Repair to roof of Greenfield Middle School involving some tear-off and some overlay

Job Location: 195 Federal St

Classifica	tion				Effective Dates and Total Rates							
APPRIO	NTICE	LABORER Demo	Burners									
Eato	Step	1	2	3	4							
1:5	%	60.00	70.00	80.00	90.00							
Apprent	ice Wages	hall be no less the	in the following:									
Sup 153	7332540	46/3543.59/4546	72									
DEMO: CON	CRETEC	UTTER SA WY	ER			12/01/2010	\$50,100	06/01/2011	\$51,100	12/01/2011	\$52,350	
DEMO: JACK	CHAMME	ROPERATOR	1			12/01/2010	\$49.850	06/01/2011	\$50,850	12/01/2011	\$52,100	
DEMO: WRE	CKING L	ABORER				12/01/2010	\$49,100	06/01/2011	\$50,100	12/01/2011	\$51,350	
APPER	NTICE	LABORER Demo	Wredding Laborer	50								
Ratio	Step	1	2	3	4							
1:5	%	60.00	70.00	80.00	90.00							
Apprent	ice wages d	hall be no less tha	n the following:									
Step 1\$3	6882539	94/3\$42,99/4\$46.	ÚS									
DIVER						08/01/2010	\$77.520	08/01/2011	\$80.270			
DIVER TEND	DER					08/01/2010	\$62.570	08/01/2011	\$65,320			
DIVER TEND	DER (EFF	LUENT)				08/01/2010	\$81,250	08/01/2011	\$85,380			
DIVER/SLUR	RY (EFF	LUENT)				08/01/2010	\$103,680	08/01/2011	\$107.800			
ELECTRICIA	N					01/01/2011	\$50,050					
APPER	NTICE	HLICTRICIAN -	Local 7 Zone B									
Ratio	Simp	1	2	3	4	5	6					
2:3****	%	50.00	55.00	60.00	65.00	70.00	75.00					
Apprent	ice wages s	hall be no less tha	n the following:			Steps 1-	2 are 1000 bes; St	apa 3-6 are 1500 hrs				
Step 152	4972326	66/3\$33.01/4\$34.	705 \$38,84/6\$40.7	2								
ELEVATOR (						01/01/2011	\$61,610	01/01/2012	\$63,110			
APPRIO	NTICE	ELEVATOR CO	NSTRUCTOR - Lo	cal 41								
Kato	Step	1	2	3	4	5						
1:1	%	50.00	55.00	65.00	70.00	80.00						
Apprent	ice wages s	hall be no less tha	n the following:			Steps 1-	2 are 6 mos.; Step	n 3-5 are 1 year				
Step 1\$3	8682540	97/3\$45.56/4\$47.	855 \$52.44									
ELEVATOR (	CONSTR	UCTOR HELP	ER			01/01/2011	\$47.850	01/01/2012	\$48,900			
FENCE & GU	IARD RA	IL ERECTOR (	HEAVY & HIG	HWAY)		12/01/2010	\$41,220	06/01/2011	\$42,220	12/01/2011	\$43,470	
FIELD ENG-	PARTY	CHIEF (BLDG,	SITE, HVY CO	(NST)		06/01/1999	\$30,230					
FIELD ENG-	CHIEFOR	SURVEY(BL	DG, SITE, HVY	CONST)		06/01/1999	\$31,230					
FIELD ENG-I	NST./RO	D PERSON(BL	DG, SITE, HVY	CONST)		06/01/1999	\$27.740					
FIRE ALARM	INSTAL	LER				01/01/2011	\$50.050					
FIRE ALARM	REPAIR	/MAINTENA	NCE			01/01/2011	\$35.010	06/01/2011	\$35,510	01/01/2012	\$36,010	
-		/ COMMISSI	ONING			10.101.100.10	*****	acontos:	B 45 000	10.01.00.	******	
FIREMAN						12/01/2010	\$46.110	06/01/2011	\$46.990	12/01/2011	\$47.860	
						06/01/2012	\$48.810	12/01/2012	\$49.760			

This wage schedule must be posted at the work site in accordance with M.G.L. ch. 149, sec. 27

Failure of the employer to pay "prevailing wage rates," which are the minimum wage rates listed above, on public works projects is a violation of M.G.L. ch. 149, sec. 27. Employees not receiving such rates should report the violation to the Office of Fair Labor and Business Practices, 100 Cambridge Street, Boston, MA 02108; Tel: 617-727-3465.

Issue Date: 05/17/2011 Wage Request Number: 20110517-010 Page 3 of 11



### DEPARTMENT OF LABOR STANDARDS

### **Prevailing Wage Rates**

As determined by the Commissioner under the provisions of the Massachusetts General Laws, Chapter 149, Sections 26 to 27H



Awarding Authority: Town of Greenfield

Contract Number: City/Town: GREENFIELD

Description of Work: Middle School Roof Repair Works - Repair to roof of Greenfield Middle School involving some tear-off and some overlay

Job Location: 195 Federal St

Classific	tion					Effective Dates and Total Rates							
APPER	NTICE	OPERATING IN	G - Local 98 Class	3									
Kato	Step	1	2	3	4								
1:6	%	60.00	70.00	80.00	90.00								
Apprent	ice wages s	ball be no less tha	n the following:			Steps 1-2	are 1000 hrs.; She	ps 3-4 are 2000 hm					
Step 15	34.47/2537.	38/3\$40.29/4\$43.	20										
FLAGGER &	SIGNAL	ER (HEAVY &	HIGHWAY)			12/01/2010	\$35,780	06/01/2011	\$36,780	12/01/2011	\$36.780		
FLOORCOV	ERER					03/01/2011	\$50,330	09/01/2011	\$51,580				
APPRI	NTICE	PLOORCO VERE	R - Local 2168 Zor	e III									
Kato	Simp	1	2	3	4	5	6	7	8				
1:1	%	50.00	55.00	60.00	65.00	70.00	75.00	80.00	85.00				
Apprent	ice rate sh	all be no less than	the following:			Steps are	750 hrs.						
Step 15	23.992\$2.5	41/3\$35.61/4\$37.	03/5 \$39.57/6\$40.99	7543.53/8544.95									
FORK LIFT						12/01/2010	\$46,330	06/01/2011	\$47.210	12/01/2011	\$48,080		
						06/01/2012	\$49.030	12/01/2012	\$49.980				
GENERATO	RS/LIGHT	TING PLANTS				12/01/2010	\$42,880	06/01/2011	\$43,760	12/01/2011	\$44,630		
						06/01/2012	\$45,580	12/01/2012	\$46,530				
GLAZIER (G	LASS PL	ANK /A IR BAR	RIER/INTERIO	R SYSTEMS)		06/01/2010	\$46,780	06/01/2011	\$48,380	06/01/2012	\$49.930		
APPRIS	NTICE	GLAZIBR - Local	11333										
Ratio	Simp	1	2	3	4	5	6	7	8				
1:1	%	50.00	56.25	62.50	68.75	75.00	81.25	87.50	93.75				
Apprent	ice vages s	hall be no less tha	n the following:										
Step 15	25.0 2/252 7	02/3\$29.52/4\$31.	525 \$34,02/6\$36.00	7542.78/8544.78									
GRADER/TR	ENCHIN	G MACHINE/D	ERRICK			12/01/2010	\$46,640	06/01/2011	\$47,520	12/01/2011	\$48.390		
						06/01/2012	\$49.340	12/01/2012	\$50.290				
HVAC(DUC	TWORK)					01/01/2011	\$50,950						
HVAC(ELEC	TRICAL	CONTROLS)				01/01/2011	\$50,050						
HVAC (TEST	ING ANI	D BALANCING	- AIR)			01/01/2011	\$50,950						
HVAC (TEST	ING AND	D BALANCING	-WATER)			08/17/2011	\$55,460	09/17/2011	\$55,960	03/17/2012	\$56,460		
						09/17/2012	\$57.210	03/17/2013	\$57.960				
HVAC MECE	HANIC					08/17/2011	\$55,460	09/17/2011	\$55,960	03/17/2012	\$56,460		
						09/17/2012	\$57.210	03/17/2013	\$57.960				
HYDRAULK	DRILLS	(HEAVY & H	(GHWAY)			12/01/2010	\$41.720	06/01/2011	\$42,720	12/01/2011	\$43.970		
INSULATOR	(PIPES &	k TANKS)				09/01/2010	\$52,980						
APPRI	NTICE	ASBESTOSING	ILATOR (Pipes &	Tanks) - Local 68	pringfield								
Ratio	Step	1	2	3	4								
1:4	%	50.00	60.00	70.00	80.00								
Apprent	ice vages s	tall be no less tha	n the following:			Steps are	1 year						
Sup 15	33.002536	99/3540.99/4544.	98										
IRONWORK	ER/WELI	DER				03/16/2010	\$52,260						

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Issue Date: 05/17/2011 Wage Request Number: 20110517-010 Page 4 of 11



### DEPARTMENT OF LABOR STANDARDS

### **Prevailing Wage Rates**

As determined by the Commissioner under the provisions of the Massachusetts General Laws, Chapter 149, Sections 26 to 27H



Awarding Authority: Town of Greenfield

Contract Number: City/Town: GREENFIELD

Description of Work: Middle School Roof Repair Works - Repair to roof of Greenfield Middle School involving some tear-off and some overlay

Job Location: 195 Federal St

Classific	ation					Effective Da					
APPER	NTICE	BRONWOR KEER-	Local 7Spring field	4							
Ratio	Sup	1	2	3	4	5	6				
	%	60.00	70.00	75.00	80.00	85.00	90.00	•			
Appren	ice wages i	ball be no less tha	n the following:			Structure	l 1:6; Omament	d 1:4			
Step 15	41.622344	28/3\$45.61/4\$46.	945 \$48.27/6\$49.60	9							
JACKHAMM	TER & PA	VINGBREAK	ER OPERATOR			12/06/2010	\$41,090	06/06/2011	\$42,090	12/05/2011	\$42,640
						06/04/2012	\$43,640	12/03/2012	\$44.990		
LABORER						12/06/2010	\$40.840	06/06/2011	\$41.840	12/05/2011	\$42,390
						06/04/2012	\$43,390	12/03/2012	\$44,340		
APPRI	NTICE	LABORER - Zon	e 3 Building & Site								
Ratio	Sap	1	2	3	4						
1:5	%	60.00	70.00	80.00	90.00						
Appren	ice wages i	hall be no less tha	n the following:								
Step 15	30.962533	43/3535.90/4538.	37								
LABORER (	HEAVY &	HIGHWAY)				12/01/2010	\$40.970	06/01/2011	\$41.970	12/01/2011	\$43,220
APPER	NTICE	LABORER - Zon	e 3 Heavy & Highw	ay							
Kato	Step	1	2	3	4						
1:5	%	6000	70.00	80.00	90.00						
Appren	ice wages i	ball be no less tha	n the following:								
		56/3536.03/4538.									
		ER TENDER				12/06/2010	\$40.840	06/06/2011	\$41,840	12/05/2011	\$42,390
						06/04/2012	\$43,390	12/03/2012	\$44,340		
LABORER: 0	EMENT	FINISHER TEX	DER			12/06/2010	\$41,090	06/06/2011	\$42.090	12/05/2011	\$42,640
						06/04/2012	\$43,640	12/03/2012	\$44.590		
LABORER: H	AZARD	OUS WASTE/A	SBESTOS REM	OVER		12/06/2010	\$40,840	06/06/2011	\$41.840	12/05/2011	\$42.390
						06/04/2012	\$43,390	12/03/2012	\$44,340		
LABORER: N	MASON T	TENDER				12/06/2010	\$41,840	06/06/2011	\$42,840	12/05/2011	\$43,390
						06/04/2012	\$44,390	12/03/2012	\$45,340		
LABORER: N	MASON T	TENDER (HEAT	VY & HIGHWAY	Y)		12/01/2010	\$41,220	06/01/2011	\$42,220	12/01/2011	\$43.470
LABORER: N	ишт-п	RADE TENDER	2			12/06/2010	\$40,840	06/06/2011	\$41,840	12/05/2011	\$42,390
						06/04/2012	\$43,390	12/03/2012	\$44,340		
LABORER: 1	REE RE	MOVER				12/06/2010	\$40,840	06/06/2011	\$41.840	12/05/2011	\$42,390
						06/04/2012	\$43,390	12/03/2012	\$44,340		
This classifier	ation appli	es to the wholes	ale removal								
_		-	d trimming of bra	nches and limb	s, and applica			locations not on o			*****
LASER BEA	M OPERA	ATOR				12/06/2010	\$41,090	06/06/2011	\$42.090	12/05/2011	\$42.640
						06/04/2012	\$43,640	12/03/2012	\$44.590		
			& HIGH WAY)			12/01/2010	\$41,220	06/01/2011	\$42,220	12/01/2011	\$43,470
MARBLE &	TILEFIN	SHERS				03/07/2011	\$50.980	09/05/2011	\$52,330	03/05/2012	\$53,480

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Issue Date: 05/17/2011 Wage Request Number: 20110517-010 Page 5 of 11



### DEPARTMENT OF LABOR STANDARDS

### **Prevailing Wage Rates**

As determined by the Commissioner under the provisions of the Massachusetts General Laws, Chapter 149, Sections 26 to 27H



Awarding Authority: Town of Greenfield

Contract Number: City/Town: GREENFIELD

Description of Work: Middle School Roof Repair Works - Repair to roof of Greenfield Middle School involving some tear-off and some overlay

Job Location: 195 Federal St

Classific	ation			Effective Dates and Total Rates								
APPER	NTICE	MARBLE-TILE-T	TERRAZZO MNIS	HR -Local 1 Mark	de/Tile (Spe/H	m)						
Kato	Step	1	2	3	4	5	6					
1:3	%	50.00	60.00	70.00	80.00	90.00	95.00					
Appren	ice wages	shall be no less than	n the following:			Steps are	800 hours					
Step 15	37.27/2540	01/3\$42.75/4\$45.5	505 \$48.24/6\$49.61									
MARBLEM	ASONS,T	ILELAYERS&	TERRAZZO M	ECH		03/07/2011	\$57.900	09/05/2011	\$59,250	03/05/2012	\$60,650	
APPER	NTICE	MARBLE-TILE-T	TERRAZZO MECI	I - Local 1 Marble	Tile (Spe/Fitt)							
Ratio	Step	1	2	3	4	5	6					
1:5	%	5000	60.00	70.00	80.00	90.00	95.00					
Approx	ice wages	shall be no less than	the following:									
Sup 15	40.8 8254 4	28/3\$47.69/4\$51.0	09/5 \$54.50/6\$56.20	)								
MECH. SWE	EPEROF	ERATOR (NON	-CONSTRUCT	ION)		07/01/2010	\$29.590	07/01/2011	\$30.290			
MECH. SWE	EPEROF	ERATOR (ON	CONST. SITES)			12/01/2010	\$46,640	06/01/2011	\$47.520	12/01/2011	\$48,390	
						06/01/2012	\$49.340	12/01/2012	\$50.290			
MECHANIC	WELDE	R/BOOM TRUC	K			12/01/2010	\$46,110	06/01/2011	\$46.990	12/01/2011	\$47.860	
						06/01/2012	\$48,810	12/01/2012	\$49.760			
MILLWRIGH	T (Zone	3)				04/01/2011	\$54,530					
APPER	NTICE	MILLWRIGHT-	Local 1121 Zone 3									
Rato	Step	1	2	3	4	5	6	7	8			
1:5	%	5000	55.00	60.00	65.00	70.00	75.00	80.00	85.00			
Appren	ice wages	shall be no less than	the following:									
Step 15	35.442\$36	95/3\$40.05/4\$41.5	56/5 \$43,87/6\$45,38	77\$47.6978\$49.20								
MORTAR M	DOER					12/06/2010	\$41.090	06/06/2011	\$42,090	12/05/2011	\$42,640	
						06/04/2012	\$43,640	12/03/2012	\$44.590			
OILER						12/01/2010	\$41.800	06/01/2011	\$42.680	12/01/2011	\$43.550	
						06/01/2012	\$44,500	12/01/2012	\$45,450			
OTHER POW	ER DRI	VEN EQUIPME	NT - CLASS VI			12/01/2010	\$39.820	06/01/2011	\$40.700	12/01/2011	\$41,570	
						06/01/2012	\$42,520	12/01/2012	\$43,470			
PAINTER (B	RIDGES	TANKS)				01/01/2011	\$64.410	07/01/2011	\$65,410	01/01/2012	\$66,410	
						07/01/2012	\$67.410	01/01/2013	\$68,410			
APPER	NTICE	PAINTER Local 3	S - BRIDGES/TA	NKS								
Ratio	Simp	1	2	3	4	5	6	7	8			
1:1	%	50.00	55.00	60.00	65.00	70.00	75.00	80.00	90.00			
	ice wages	shall be no less than	the following:			Steps are	750 hrs.					
Appren			168 951 51/6953 60	77\$55.81/8\$60.11								
	29.3 1/253 6	86/3539.01/4541.1										
Sup 15		R SANDBLAST,				01/01/2011	\$44,480	07/01/2011	\$45,480	01/01/2012	\$46,480	

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Issue Date: 05/17/2011 Wage Request Number: 20110517-010 Page 6 of 11



### DEPARTMENT OF LABOR STANDARDS

### **Prevailing Wage Rates**

As determined by the Commissioner under the provisions of the Massachusetts General Laws, Chapter 149, Sections 26 to 27H



Awarding Authority: Town of Greenfield

Contract Number: City/Town: GREENFIELD

Description of Work: Middle School Roof Repair Works - Repair to roof of Greenfield Middle School involving some tear-off and some overlay

Job Location: 195 Federal St

Classific	ation					Effective Da	tes and Total	Rates			
APPER	NTICE	PAINTER Logi	35 Zone 3 - Sprayé	in diat-New							
Kato	Step	1	2	3	4	5	6	7	8		
1:1	%	50.00	55.00	60.00	65.00	70.00	75.00	80.00	90.00		
Apprent	ice wages	shall be no less tha	n the following:								
Sup 15	21.2 4252	4.18/3525.53/4526.	875 \$36.42/6\$37.7	6/7\$39.10/8\$41.79							
PAINTER (S	PRAY O	R SANDHLAST	REPAINT)			01/01/2011 07/01/2012	\$41.800 \$44.800	07/01/2011 01/01/2013	\$42.800 \$45.800	01/01/2012	\$43,800
APPRIS	NTICE	PAINTER Logi	35 Zone 3 - Sprayé	in diast-Repaint							
Ratio	Simp	1	2	3	4	5	6	7	8		
1:1	%	50,00	55.00	60.00	65.00	70.00	75.00	80.00	90.00		
Apprent	ice wages	shall be no less tha	n the following:								
	-	2.71/3\$23.92/4\$25.		5/7536.96/8539.38							
PAINTER (T	RAFFIC	MARKINGS)				12/01/2010	\$40.970	06/01/2011	\$41.970	12/01/2011	\$43,220
		BRUSH, NEW)				01/01/2011	\$43.080	07/01/2011	\$44.080	01/01/2012	\$45,080
		rfaces to be paint		truction, NEW		07/01/2012	\$46,080	01/01/2013	\$47,080		
paint rate shall APPR H		PAINTER - Local	135 Zone 3 - BRU	SH NEW			Evitina.				
Ratio	Simp	1	2	3	4	5	6	7	8		
1:1	%	50.00	55.00	60.00	65.00	70.00	75.00	80.00	90.00		
Apprent	ice wages	shall be no less tha	n the following:			Steps are	750 hm.				
Step 15	20.5 4252	3.41/3824.69/4825.	965 \$35.44/6\$36.7	1/7\$37.98/8\$40.53							
PAINTER/T	APER (	BRUSH, REPAIN	NT)			01/01/2011	\$40,400	07/01/2011	\$41,400	01/01/2012	\$42,400
						07/01/2012	\$43,400	01/01/2013	\$44,400		
APPRI	NTICE	PAINTER Logal	35 Zone 3 - BRUS	REPAINT							
Ratio	Sup	1	2	3	4	5	6	7	8		
1:1	%	50.00	55.00	60.00	65.00	70.00	75.00	80.00	90.00		
Apprent	ice vages	shall be no less tha	n the following:			Steps are	750 hrs.				
Sup 15	1920252	1.94/3\$23.08/4\$24.	225 \$33.56/6\$34.7	0/7\$35.84/8\$38.12							
PANEL & PI	CKUPT	RUCKS DRIVER	2			12/01/2010	\$44.100	06/01/2011	\$44,500	08/01/2011	\$44.850
						12/01/2011	\$45,510	06/01/2012	\$45,810	08/01/2012	\$45,860
						12/01/2012	\$47.350				
PIER AND D DECK)	осксо	INSTRUCTOR (	UNDERFINNIN	IG AND		04/04/2011	\$58,840	08/01/2011	\$60,210		
PILE DRIVE	R					04/04/2011	\$58,840	08/01/2011	\$60,210		
APPRI	NTICE	PILE DRIVER - I	Local 56 Zone 3								
Kato	Step	1	2	3	4	5	6	7	8		
	%	60.00	65.00	70.00	75.00	80.00	85.00	90.00	95.00		
1:3											

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Issue Date: 05/17/2011 Wage Request Number: 20110517-010 Page 7 of 11



### DEPARTMENT OF LABOR STANDARDS

### **Prevailing Wage Rates**

As determined by the Commissioner under the provisions of the Massachusetts General Laws, Chapter 149, Sections 26 to 27H



Awarding Authority: Town of Greenfield

Contract Number: City/Town: GREENFIELD

Description of Work: Middle School Roof Repair Works - Repair to roof of Greenfield Middle School involving some tear-off and some overlay

Job Location: 195 Federal St

Classific	tion				Effective Dates and Total Rates							
PIPELA YER						12/06/2010	\$41.090	06/06/2011	\$42.090	12/05/2011	\$42.640	
						06/04/2012	\$43,640	12/03/2012	\$44.590			
PIPELA YER	(HEAVY	& HIGHWAY)				12/01/2010	\$41,220	06/01/2011	\$42,220	12/01/2011	\$43,470	
PLUMBER &	PIPEFIT	TER				03/17/2011	\$55,460	09/17/2011	\$55,960	03/17/2012	\$56,460	
						09/17/2012	\$57.210	03/17/2013	\$57.960			
APPRIT	NTICE	PLUMBER/PIPE	MITTHE - Local 104	1								
Ratio	Simp	1	2	3	4	5						
1:5	%	45.00	50.00	60.00	70.00	80.00						
Apprent	ice wages s	hall be no less tha	n the following:			Steps an	e 2000 hrs.					
		16/3\$36.62/4\$40.0										
		OLS (TEMP.)				03/17/2011	\$55,460	09/17/2011	\$55,960	08/17/2012	\$56,460	
						09/17/2012	\$57.210	03/17/2013	\$57.960			
PNEUMATIC	DRILL/	TOOL OPERAT	OR (HEAVY &	HIGHWAY)		12/01/2010	\$41,220	06/01/2011	\$42,220	12/01/2011	\$43,470	
POWDERMA	N & BLA	STER	Section 1	STATE OF THE STATE		12/06/2010	\$41.840	06/06/2011	\$42,840	12/05/2011	\$43.390	
						06/04/2012	\$44.390	12/03/2012	\$45,340			
POWDERMA	N & BLA	ASTER (HEAV)	& HIGHWAY			12/01/2010	\$41.970	06/01/2011	\$42,970	12/01/2011	\$44.220	
PUMP OPER.						12/01/2010	\$46,640	06/01/2011	\$47,520	12/01/2011	\$48,390	
						06/01/2012	\$49.340	12/01/2012	\$50,290			
PUMP OPER.	ATOR (D	EWATERING,	OTHER)			12/01/2010	\$46.110	06/01/2011	\$46,990	12/01/2011	\$47.860	
						06/01/2012	\$48.810	12/01/2012	\$49.760			
READY-MIX	CONCR	ETE DRIVER				05/01/2008	\$30.870					
RESIDENTIA	I WOOD	FRAME CAR	PENTER **			04/01/2010	\$32,140					
			nter classification	applies only								
			residences that d	not exceed								
four stories in			in ma maid artist	WEATHERITA	TWO makes	cts shall be paid	A. DESINENTI	AT WOOD ED	ME CARRENT	ED mts		
			midential Wood Fro		active langer	de siani ocpani	aic Managarati	ML WOOD PRO	CHE CARTENI	Lan. Dance.		
Ratio	Simp	1	2	3	4	5	6	7	8			
**	%	6000	60.00	65.00	70.00	75.00	8000	8500	90.00			
	-	Shall be no less the		65.26	70.00		1.2:6-8.3:9-11	8310	90.00			
			in the Following: 985 \$27.01/6\$28.03			** 1:14	0, 2:0-0, 3: y-11					
		D BUGGY OP		r racy, using autry		12/06/2010	\$41.090	06/06/2011	\$42,090	12/05/2011	\$42,640	
MUDEA) NAME	JIOREE	D BOOGH OF	KATOK			06/04/2012	\$43.640		\$44.590	12/05/2011	342040	
ROLLER OP	ED ATON					12/01/2010	\$45,500	12/03/2012	\$46,380	12/01/2011	\$47.250	
MALLER OF	EKATOK					06/01/2010	\$48,200	12/01/2012	\$46,380	12/01/2011	₹1.230	
ROO FER (C)	al transfer					01/01/2012	\$46,000	07/16/2011	\$46,500	01/01/2012	\$46,750	
MADER (CO	ar or but	-,				07/16/2012	\$47,250	01/01/2013	\$47,500	GL/GL/AFIZ	440.130	
POOFER/In	Roofe V	Viste my on fine #1	Roofer Damproof	(4)		01/01/2012	\$45,000	07/16/2011	\$45,500	01/01/2012	\$45,750	
mA/ren(m	a.ouer v	and the state of t	was transpoor	8		07/16/2012	\$46.250	01/01/2013	\$46,500	otivitariz.	4-2.1.20	
						0//10/2012	340,230	01/01/2013	\$40,300			

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Issue Date: 05/17/2011 Wage Request Number: 20110517-010 Page 8 of 11



### DEPARTMENT OF LABOR STANDARDS

### **Prevailing Wage Rates**

As determined by the Commissioner under the provisions of the Massachusetts General Laws, Chapter 149, Sections 26 to 27H



Awarding Authority: Town of Greenfield

Contract Number: City/Town: GREENFIELD

Description of Work: Middle School Roof Repair Works - Repair to roof of Greenfield Middle School involving some tear-off and some overlay

Job Location: 195 Federal St

Classific	tion					Effective Dates and Total Rates						
APPRIE	NTICE	ROOFIR - Local	248									
Kato	Step	1	2	3	4	5	6	7	8			
1:3	%	6000	65.00	70.00	75.00	80.00	85.00	90.00	95.00			
Apprent	ice wager	shall be no less the	n the following:			Steps are	750 hrs. Roofer(Te	or Off)1:1; Same a	above			
Step 157	23.3 4253	5,94/3\$37,23/4\$38.	536 \$39.82/6\$41.12	2/7\$42.41/8\$43.71								
ROO FER SLA	ATE/T	LE/PRECAST	CONCRETE			01/01/2011	\$46,000	07/16/2011	\$46,500	01/01/2012	\$46,750	
						07/16/2012	\$47.250	01/01/2013	\$47.500			
A1998.10	NTICE	ROOFIR (Slate)	Tile/Precast Concret	n) - Local 248								
Ratio	Sap	1	2	3	4	5	6	7	8			
1:3	%	60.00	65.00	70.00	75.00	80.00	85.00	90.00	95.00			
Apprent	ice wager	shall be no less the	n the following:			Steps are	750 hrs.					
Step 153	23.6 4253	6.76/3\$38.08/4\$39.	405 \$40.72/6\$42.04	V7\$43.36/8\$44.68								
SCRAPER						12/01/2010	\$46.110	06/01/2011	\$46.990	12/01/2011	\$47.860	
						06/01/2012	\$48,810	12/01/2012	\$49.760			
SELF-POWE	RED RO	ILLERS AND CO	OMPACTORS (T	(AMPERS)		12/01/2010	\$45,500	06/01/2011	\$46,380	12/01/2011	\$47.250	
						06/01/2012	\$48,200	12/01/2012	\$49,150			
SELF-PROPE	LLED	POWER BROOM	1			12/01/2010	\$42.880	06/01/2011	\$43.760	12/01/2011	\$44.630	
						06/01/2012	\$45,580	12/01/2012	\$46,530			
SHEETMETA	L WOR	KER.				01/01/2011	\$50,950					
APPRIC	NTICE	SERRIT METAL	WORKER - Local	63								
Ratio	Step	1	2	3	4	5	6	7	8	9	10	
1:3	%	45.00	50.00	55.00	60.00	65.00	70.00	75.00	80.00	85.00	90.00	
Apprent	ice vage	shall be no less the	n the following Ste	pa:								
1\$17.64	/2\$19.60	3\$25.11 A\$27 39/50	29.69/6\$31.97/7\$3	424/8\$40.76/9\$40	3.31/1.0\$45.86							
SIGN ERECT	OR.					06/01/2009	\$37.780					
APPRIO	NTICE	SIGN ERECTOR	-Local 35 Zone 3									
Kato	Simp	1	2	3	4	5	6	7	8	9		
1:1	%	50.00	55.00	60.00	65.00	70.00	75.00	80.00	85.00	90.00		
Apprent	ice wager	shall be no less the	n the following:			Steps are	4 mos					
Sup 1\$1	19.48252	3.12/3524.36/4525.	605 \$30,34/6\$31.50	W7\$32.82/8\$34.06	<b>#\$35.30</b>							
SPECIALIZE	D EAR	TH MOVING BQ	UIP <35 TONS			12/01/2010	\$44.560	06/01/2011	\$44.960	08/01/2011	\$45.310	
						12/01/2011	\$45,970	06/01/2012	\$46.270	08/01/2012	\$46,620	
						12/01/2012	\$47.650					
SPECIALIZE	D EART	TH MOVING BQ	UIP > 35 TONS			12/01/2010	\$44,850	06/01/2011	\$45.250	08/01/2011	\$45,600	
						12/01/2011	\$46,260	06/01/2012	\$46,560	08/01/2012	\$46.910	
						12/01/2012	\$47.940					
SPRINKLER	FITTER	1				01/01/2010	\$56,700					

This wage schedule must be posted at the work site in accordance with M.G.L. ch. 149, sec. 27

Failure of the employer to pay "prevailing wage rates," which are the minimum wage rates listed above, on public works projects is a violation of M.G.L. ch. 149, sec. 27. Employees not receiving such rates should report the violation to the Office of Fair Labor and Business Practices, 100 Cambridge Street, Boston, MA 02108; Tel: 617-727-3465.

Issue Date: 05/17/2011 Wage Request Number: 20110517-010 Page 9 of 11



### THE COMMONWEALTH OF MASSACHUSETTS EXECUTIVE OFFICE OF LABOR AND WORKFORCE DEVELOPMENT DEPARTMENT OF LABOR STANDARDS

### **Prevailing Wage Rates**

As determined by the Commissioner under the provisions of the Massachusetts General Laws, Chapter 149, Sections 26 to 27H



Awarding Authority: Town of Greenfield

Contract Number: City/Town: GREENFIELD

Description of Work: Middle School Roof Repair Works - Repair to roof of Greenfield Middle School involving some tear-off and some overlay

Job Location: 195 Federal St

Classific	ation					Effective Da	tes and Total	Rates			
APPER	NTICE	SPRINKLERFT	TER - Local 676								
Eato	Simp	1	2	3	4	5	6	7	8	9	10
1:1	%	40.00	45.00	50.00	55.00	60.00	65.00	70.00	75.00	80.00	85.00
Appren	áce vage	shall be no less the	n the following Step								
1\$32.40	V2\$34.43	73\$36.45 A\$38 A8/55	\$40.50/6\$42.53/7\$4	155/8\$46.58/9\$4	8.601 0\$30.63						
TELECOMM	TUNICA	TION TECHNIC	IAN			01/01/2011	\$35,010	06/01/2011	\$35,510	01/01/2012	\$36,010
APPER	NTICE	TELECOMMUN	ICATION TECHNI	CIAN- Local 72	Come III						
Ratio	Step	1	2	3	4	5	6				
1:1	%	50.00	55.00	60.00	65.00	70.00	75.00				
Appren	áce vage	shall be no less the	n the following:			Steps 1	& 2 are 800 hours				
Step 15	243 6252	5.42/3\$26.48/4\$27.	558 \$28.61/6\$29.69								
TERRAZZO	FINISH	ERS				03/07/2011	\$50,980	09/05/2011	\$52,330	03/05/2012	\$53,480
APPER	NTICE	MARBLE-TILE-	TERRAZZO MNIS	HIR-Local 1 Ma	rble/Tile (Spe/I	fer)					
Ratio	Step	1	2	3	4	5	6				
1:3	%	50.00	60.00	70.00	80.00	90.00	95.00				
Appren	dce wager	shall be no less the	n the following:			Steps an	e 800 hours				
Step 1\$	3727034	0.01/3\$42.75/4\$45.	505 \$48.24/6\$49.61								
TEST BORD	OG DRIL	LER				12/01/2010	\$50,500	06/01/2011	\$51.500	12/01/2011	\$52.750
TEST BORD	OG DRII	LER HELPER				12/01/2010	\$49.220	06/01/2011	\$50.220	12/01/2011	\$51,470
TEST BORD	G LAB	ORER				12/01/2010	\$49,100	06/01/2011	\$50,100	12/01/2011	\$51,350
TRACTORS						12/01/2010	\$45,500	06/01/2011	\$46,380	12/01/2011	\$47.250
						06/01/2012	\$48,200	12/01/2012	\$49.150		
TRAILERS F	OR EAR	RTH MOVING E	QUIPMENT			12/01/2010	\$45,140	06/01/2011	\$45,540	08/01/2011	\$45,890
						12/01/2011	\$46,550	06/01/2012	\$46,850	08/01/2012	\$47.200
						12/01/2012	\$48,230				
TUNNEL WO	ORK - C	OMPRESSED A	IR.			12/01/2010	\$61,680	06/01/2011	\$62,930	12/01/2011	\$64.180
TUNNEL WO	ORK - C	OMPRESSED A	IR (HAZ, WASTI	E)		12/01/2010	\$63,680	06/01/2011	\$64.930	12/01/2011	\$66.180
TUNNEL WO	ORK - F	REE AIR				12/01/2010	\$53,750	06/01/2011	\$55,000	12/01/2011	\$56,250
TUNNEL WO	ORK - F	REE AIR (HAZ.	WASTE)			12/01/2010	\$55,750	06/01/2011	\$57.000	12/01/2011	\$58,250
VAC-HAUL						12/01/2010	\$44.560	06/01/2011	\$44,960	08/01/2011	\$45,310
						12/01/2011	\$45.970	06/01/2012	\$46,270	08/01/2012	\$46,620
						12/01/2012	\$47.650				
WAGONDR	ILL OP	ERATOR				12/06/2010	\$41,090	06/06/2011	\$42,090	12/05/2011	\$42,640
						06/04/2012	\$43,640	12/03/2012	\$44.590		
			Y & HIGH WAY	)		12/01/2010	\$41,220	06/01/2011	\$42.220	12/01/2011	\$43,470
WATERME	TERINS	TALLER				03/17/2011	\$55,460	09/17/2011	\$55,960	03/17/2012	\$56,460
						09/17/2012	\$57.210	03/17/2013	\$57.960		

This wage schedule must be posted at the work site in accordance with M.G.L. ch. 149, sec. 27 Failure of the employer to pay "prevailing wage rates," which are the minimum wage rates listed above, on public works projects is a violation of M.G.L. ch. 149, sec. 27. Employees not receiving such rates should report the violation to the Office of Fair Labor and Business Practices, 100 Cambridge Street, Boston, MA 02108; Td: 617-727-3465.

Issue Date: 05/17/2011 Wage Request Number: 20110517-010 Page 10 of 11



### DEPARTMENT OF LABOR STANDARDS

### Prevailing Wage Rates

As determined by the Commissioner under the provisions of the Massachusetts General Laws, Chapter 149, Sections 26 to 27H



Awarding Authority: Town of Greenfield

City/Town: GREENFIELD Contract Number:

Description of Work: Middle School Roof Repair Works - Repair to roof of Greenfield Middle School involving some tear-off and some overlay

Job Location: 195 Federal St

Classification Effective Dates and Total Rates

Minimum wage rates for apprentices employed on public works projects are listed above as a percentage of the pro-determined hourly wage rate established by the Commissioner under the provisions of the M.G.L. c. 149, ss. 26-27D. Apprentice ratios are established by the Division of Apprenticeship Training pursuant to M.G.L. c. 23. ss. 11E-11L.

All apprentices must be registered with the Division of Apprenticeship Training in accordance with M.G.L. c. 23, ss. 11E-11L.

All steps are six months (1000 hours) unless otherwise specified.

- Ratios are expressed in allowable number of apprentices to journeymen or fraction thereof. Multiple ratios are listed in the comment field.
- \*\*\* The job site ratio of 2 apprentices (APP) for every 3 journeymen (JM) is allowed as follows:

  1 JM: 1 APP; 2-3 JM: 2 A PP; 4-6 JM: 4 APP; 7-9 JM: 6 APP; 10-12 JM: 8 APP; 13-15 JM: 10 APP; etc.

  \*\*\*\* The job site ratio of 2 apprentices (APP) for every 3 journeymen (JM) is allowed as follows:

This wage schedule must be posted at the work site in accordance with M.G.L., ch. 149, sec. 27 Failure of the employer to pay "prevailing wage rates," which are the minimum wage rates listed above, on public works projects is a violation of M.G.L. ch. 149, sec. 27. Employees not receiving such rates should report the violation to the Office of Fair Labor and Business Practices, 100 Cambridge Street, Boston, MA 02108; Td: 617-727-3465.

Issue Date: 05/17/2011 Wage Request Number: 20110517-010 Page 11 of 11

### DOCUMENT 00 41 13

## BID FORM - STIPULATED SUM (SINGLE-PRIME CONTRACT)

To:	
City of 14 Co	e of the Mayor of Greenfield ourt Square nfield, MA 01301
Proje	ct: Greenfield Middle School Roof Repairs
Date.	<b></b>
	nitted by: name and address)
1.	OFFER
	Having examined the Place of The Work and all matters referred to in the Instructions to Bidders and the Contract Documents prepared by the Engineer for the above mentioned project, we, the undersigned, hereby offer to enter into a Contract to perform the Work for the Sum of:
	\$ dollars, in lawful money of the United States of America.
	We have included, the security deposit Bid Bond as required by the Instruction to Bidders
	All applicable federal taxes are included and State of Massachusetts taxes are included in the Bid Sum.
2.	ACCEPTANCE
	This offer shall be open to acceptance for sixty days from the bid closing date.
	If this bid is accepted by the Owner within the time period stated above, we will:
	- Execute the Agreement within seven days of receipt of Notice of Award
	- Furnish the required bonds within seven days of receipt of Notice of Award in the form described in Supplementary Conditions.

- Commence work within thirty days after written acceptance of this bid

If this bid is accepted within the time stated, and we fail to commence the Work or we fail to provide the required bonds, the security deposit shall be forfeited as damages to the Owner by reason of our failure, limited in amount to the lesser of the face value of the security deposit or the difference between this bid and the bid upon which a Contract is signed.

In the event our bid is not accepted within the time stated above, the required security deposit will be returned to the undersigned, in accordance with the provisions of the Instructions to Bidders; unless a mutually satisfactory arrangement is made for its retention and validity for an extended period of time.

### 3. CONTRACT TIME

If this Bid is accepted, we will complete the Work by the 26<sup>th</sup> day of August, 2011.

### 4. CHANGES TO THE WORK

When the Engineer establishes that the method of valuation for Changes in the Work will be net cost plus a percentage fee in accordance with General Conditions, our percentage fee shall be:

percent overhead and profit on the net cost of our own Work;

percent on the gross cost of work done by any Subcontractor.

On work deleted from the Contract, our credit to the Owner shall be the Engineer approved net cost plus % of the overhead and profit percentage noted above.

### 5. ADDENDA

The following Addenda have been received. The modifications to the Bid Documents noted below have been considered and all costs are included in the Bid Sum.

Addendum # Dated

Addendum # Dated

### 6. APPENDICES

The following documents are attached to and made a condition of the Bid:

Bid security in form of Document 00 43 00, Procurement Form Supplements, including:

Appendix A - List of Subcontractors.

Appendix B - List of Unit Prices.

Appendix C- List of Alternates.

Appendix D- List of Mechanical Information.

7.

Appendix E- List of Equipment.

BID FORM SIGNATURES	
The Corporate Seal of	
(Bidder - print the full name of your firm)	
was hereunto affixed in the presence of:	
Authorized signing officer (Seal)	Title
Authorized signing officer	Title
(Seal)	
If the Bid is a joint venture or partnership, add a member of the joint venture in the appropriate f	

END OF DOCUMENT

### DOCUMENT 00 43 00

### PROCUREMENT FORM SUPPLEMENTS

То:	PROCUREME	NI FORM SUPPLEMENTS
Proje	ect:	
Date		
Subn	nitted by	
(full	name and address)	
Form		nstructions to Bidders, and Document 00 41 13, Bid Form Supplements listed below. The information art of the Bid Form.
The 1	following Appendices are attached to	this document:
	Appendix A - List of Subcontractor portions of the Work each Subcontr	s: Include names of all major Subcontractors and actor will perform.
	Appendix B - List of Unit Prices: In Contract Documents.	clude listing of unit prices specifically requested by
		clude cost variation to Bid Sum Price applicable to the General requirements - Price and Payment Procedures.
	Appendix D - List of Supplementar	y Mechanical Information.
BID	FORM SUPPLEMENTS SIGNATU	RES
	The Corporate Seal of	
	(Bidder - print the full name of your	· firm)
	was hereunto affixed in the presence	e of:
	(Authorized signing officer	Title)
	(Seal)	
	(Authorized signing officer (Seal)	Title)

### APPENDIX A - LIST OF SUBCONTRACTORS

Herewith is the list of subcontractors referenced in the bid submitted by:

Bidder)	
To (Owner)	
Dated and which is an integral part o	f the Bid Form.
The following work will be performed (or provided)	by subcontractors and coordinated by us:
WORK SUBJECT	NAME

### APPENDIX B - LIST OF UNIT PRICES

The following is the list of unit prices referenced in the bid submitted by:

(Bidder)		
To (Owner)		
Dated and which is an integral part of the B	sid Form.	
The following are Unit Prices for specific portions of the Wauthorized variations from the Contract Documents.	Vork as listed, an	nd are applicable to
ITEM DESCRIPTION	UNIT	UNIT VALUE
Additional Walkway Pads	Ea.	

### APPENDIX C - LIST OF ALTERNATES

The following is the list of alternates referenced in the bid submitted by:			
(Bidder)	Bidder)		
To (Owner)	Co (Owner)		
Dated and which is an integral part of the Bid Form.			
The following amounts shall be added to or deducted from the Bid Sum Price. Refer to Section 01 20 00 - Price and Payment Procedures: Schedule of Alternates for description of alternates.			
Alternate # 1 Furnish 20 year manufacturer's warranty	(Add) (Deduct)	\$	

## APPENDIX D - LIST OF EQUIPMENT

The following is the list of equipment referenced in the bid submitted by:	
(Bidder)	
To (Owner)	
Dated and which is an integral part of the Bid	Form.
COMPONENT OR ITEM	MANUFACTURER

### **DOCUMENT 00 52 14**

### AGREEMENT FORM - AIA STIPULATED SUM (SINGLE-PRIME CONTRACT)

### 1.29 SUMMARY

- A. Document Includes:
  - 1. Agreement.
- B. Related Documents:
  - 1. Document 00 72 14 General Conditions AIA Stipulated Sum (Single-Prime Contract).
  - 2. Document 00 73 13 Supplementary Conditions AIA.

### 1.30 AGREEMENT

A. AIA Document A101-2007, Standard Form of Agreement Between Owner and Contractor Where the Basis of Payment is a Stipulated Sum, forms the basis of Agreement between the Owner and Contractor.

### END OF DOCUMENT

### **DOCUMENT 00 73 13**

### SUPPLEMENTARY CONDITIONS - AIA

### 1.31 SUMMARY

### A. Document Includes:

1. Supplementary Conditions.

### B. Related Documents:

- 1. Document 00 41 13 Bid Form Stipulated Sum (Single-Prime Contract)
- 2. Document 00 43 00 Procurement Form Supplements: Appendices A to D.
- 3. Document 00 52 14 Agreement Form AIA Stipulated Sum (Single-Prime Contract).
- 4. Document 00 72 14 General Conditions AIA Stipulated Sum (Single-Prime Contract).

### 1.32 SUPPLEMENTARY CONDITIONS

- A. These Supplementary Conditions modify the General Conditions of the Contract for Construction, AIA Document A201-2007, and other provisions of the Contract Documents as indicated below. All provisions which are not so modified remain in full force and effect.
- B. The terms used in these Supplementary Conditions which are defined in the General Conditions of the Contract for Construction, AIA Document A201-2007, have the meanings assigned to them in the General Conditions.

### **ARTICLE 1.1 - BASIC DEFINITIONS**

Add the following subparagraphs:

1.1.8	Products: Means new material, machinery, components, equipment, fixtures, and systems forming the Work, but does not include machinery and equipment used for preparation, fabrication, conveying and erection of the Work. Products may also include existing materials or components required for reuse.
1.1.9	Furnish: To supply and deliver, unload, inspect for damage.
1.1.10	Install: To unpack, assemble, erect, apply, place, finish, cure, protect, clean, and make ready for use.
1.1.11	Provide: To furnish and install.

### ARTICLE 1.2 - CORRELATION AND INTENT OF THE CONTRACT DOCUMENTS

Add the following subparagraph:

### Roof Repairs Greenfield Middle School

1.2.4	Sections of Division 01 - General Requirements govern the execution of the work of all
	sections of the specifications.

### **ARTICLE 3.6 - TAXES**

Add the following subparagraph:

3.6.2	The Owner will obtain rebates on taxes paid by the Contractor on certain Products or items.
	Provide administrative assistance and cooperation to the Owner in this regard.

### **ARTICLE 8 - TIME**

Add the following subparagraph:

8.1.5	Contract Time is identified in Document 00 41 13, Bid Form.
-------	---

### ARTICLE 11.1 - CONTRACTOR'S LIABILITY INSURANCE

The types of insurance coverage are included in AIA Document A201-2007, General Conditions of the Contract, Article 11, Insurance and Bonds. Amounts and forms of insurance are specified as Supplementary Conditions.

### ARTICLE 11.5 - PERFORMANCE BOND AND PAYMENT BOND

Add the following subparagraphs:

11.5.3	The Contractor shall furnish bonds to the Owner in the following amounts:
11.5.3.1	Furnish a 100 percent Performance Bond on AIA Document A312 a standard surety bond form.
11.5.3.2	Furnish a 100 percent Payment Bond on AIA Document A312 a standard surety bond form.

### END OF DOCUMENT

### SECTION 01 00 00

### GENERAL REQUIREMENTS

### PART 1 GENERAL

### 1.1 SECTION INCLUDES

- A. Summary:
  - 1. Contract description.
  - 2. Contractor's use of premises.
  - 3. Specification conventions.
- B. Price and Payment Procedures:
  - 1. Schedule of values.
  - 2. Applications for payment.
  - 3. Change procedures.
  - 4. Unit prices.
  - 5. Alternates.
- C. Administrative Requirements:
  - 1. Coordination.
  - 2. Field engineering.
  - 3. Meetings.
  - 4. Preconstruction Meeting
  - 5. Progress meetings.
  - 6. Cutting and patching.

### D. Submittals:

- 1. Submittal procedures.
- 2. Construction progress schedules.
- 3. Proposed products list.
- 4. Product data.
- 5. Shop drawings.
- 6. Samples.
- 7. Manufacturer's instructions.
- 8. Manufacturer's certificates.

### E. Quality Requirements:

- 1. Quality control.
- 2. Tolerances.
- 3. References.
- 4. Manufacturer's field services and reports.
- 5. Examination.
- 6. Preparation.

### F. Temporary Facilities and Controls:

- 1. Temporary electricity.
- 2. Telephone and facsimile service.
- 3. Temporary water service.

### Roof Repairs Greenfield Middle School

- 4. Temporary sanitary facilities.
- 5. Field offices and sheds.
- 6. Parking.
- 7. Progress cleaning and waste removal.
- 8. Fire prevention facilities.
- 9. Enclosures.
- 10. Protection of installed work.
- 11. Security.
- 12. Removal of utilities, facilities, and controls.

### G. Product Requirements:

- 1. Products.
- 2. Delivery, handling, storage, and protection.
- 3. Product options.
- 4. Substitutions.

### H. Execution Requirements:

- 1. Closeout procedures.
- 2. Final cleaning.
- 3. Protecting installed construction.
- 4. Project record documents.
- 5. Warranties.

### 1.2 CONTRACT DESCRIPTION

- A. Work of the Project includes re-roofing and sealing the building in accordance with the drawings and specifications. Several related minor projects are included in the project, such as adding a roof drain, installing two wall mounted access ladders, and installing a steel channel to support the existing corrugated steel deck in one location.
- B. Perform Work of Contract under a stipulated sum contract with Owner in accordance with Conditions of Contract.

### 1.3 CONTRACTOR'S USE OF PREMISES

- A. Limit use of premises to allow:
  - 1. Owner occupancy.
  - 2. Use of premises by public.

### 1.4 SPECIFICATION CONVENTIONS

A. These specifications are written in imperative mood and streamlined form. This imperative language is directed to the Contractor, unless specifically noted otherwise. The words "shall be" are included by inference where a colon (:) is used within sentences or phrases.

### 1.5 SCHEDULE OF VALUES

A. Submit schedule on AIA Form G703, Application for Payment.

B. Submit Schedule of Values in duplicate within 15 days after date of Owner-Contractor Agreement.

### 1.6 APPLICATIONS FOR PAYMENT

- A. Submit three copies of each application on AIA Form G702, Application for Payment, and G703, Continuation Sheet.
- B. Content and Format: Utilize Schedule of Values for listing items in Application for Payment.
- C. Payment Period: Monthly.

### 1.7 CHANGE PROCEDURES

- A. Stipulated Sum/Price Change Order: Based on Proposal Request and Contractor's fixed price quotation or Contractor's request for Change Order as approved by Engineer.
- B. Change Order Forms: AIA G701 2001, Change Order.
- C. Unit Price Change Order: For pre-determined unit prices and quantities, Change Order will be executed on fixed unit price basis. For unit costs or quantities of units of work which are not pre-determined, execute Work under Construction Change Directive. Changes in Contract Sum/Price or Contract Time will be computed as specified for Time and Material Change Order.

### 1.8 UNIT PRICES

- A. Owner will take measurements and compute quantities accordingly. Provide and assist in taking of measurements.
- B. Unit Price Schedule (see section 00 43 00):
  - 1. Walkway Pads

### 1.9 ALTERNATES

- A. Alternates quoted on Bid Forms will be reviewed and accepted or rejected at Owner's option.
- B. Coordinate related Work and modify surrounding Work as required.
  - C. Schedule of Alternates (see section 00 43 00):

Alternate No. 1: Furnish a 20 year manufacturer's warranty

### 1.10 COORDINATION

A. Coordinate scheduling, submittals, and Work of various sections of specifications to ensure efficient and orderly sequence of installation of interdependent construction elements.

- B. Verify utility requirement characteristics of operating equipment are compatible with building utilities.
- C. Coordinate space requirements and installation of mechanical and electrical work.

### 1.11 FIELD ENGINEERING

A. Establish elevations, lines, and levels and certify elevations and locations of the Work conform with Contract Documents.

### 1.12 PRECONSTRUCTION MEETINGS

A. Owner will schedule a preconstruction meeting after Notice of Award for affected parties.

### 1.13 PROGRESS MEETINGS

- A. Schedule and administer meetings throughout the progress of the Work at maximum monthly intervals.
- B. Preside at meetings, record minutes, and distribute copies within two days to those affected by decisions made.

### 1.14 CUTTING AND PATCHING

- A. Employ skilled and experienced installer to perform cutting and patching new Work; restore Work with new Products.
- B. Submit written request in advance of cutting or altering structural or building enclosure elements.
- C. Execute cutting, fitting, and patching to complete Work, and to:
  - 1. Fit several parts together, to integrate with other Work.
  - 2. Uncover Work to install or correct ill-timed Work.
  - 3. Remove and replace defective and non-conforming Work.
- D. Fit work tight to adjacent elements. Maintain integrity of wall and roof construction; completely seal voids.
- E. Fit work tight to pipes, sleeves, ducts, conduit, and other penetrations through surfaces.

### 1.15 SUBMITTAL PROCEDURES

- A. Submittal form to identify Project, Contractor, subcontractor or supplier; and pertinent Contract Document references.
- B. Apply Contractor's stamp, signed or initialed, certifying that review, verification of Products required, field dimensions, and coordination of information is in accordance with requirements of the Work and Contract Documents.

- C. Identify variations from Contract Documents and Product or system limitations which may be detrimental to successful performance of completed Work.
- D. Revise and resubmit submittals as required; identify changes made since previous submittal.

### 1.16 CONSTRUCTION PROGRESS SCHEDULES

- A. Submit initial progress schedule in duplicate within 15 days after date of Owner-Contractor Agreement for Engineer review.
- B. Submit revised schedules with each Application for Payment, identifying changes since previous version. Indicate estimated percentage of completion for each item of Work at each submission.

### 1.17 PROPOSED PRODUCTS LIST

A. Within 15 days after date of Owner-Contractor Agreement, submit list of major Products proposed for use, with name of manufacturer, trade name, and model number of each product.

### 1.18 PRODUCT DATA

- A. Product Data:
  - 1. Submitted to Engineer for review for limited purpose of checking for conformance with information given and design concept expressed in Contract Documents.
  - 2. After review, provide copies and distribute in accordance with SUBMITTAL PROCEDURES article.
- B. Submit number of copies which Contractor requires, plus two copies which will be retained by Engineer.
- C. Mark each copy to identify applicable products, models, options, and other data. Supplement manufacturer's standard data to provide information unique to this project.

### 1.19 SHOP DRAWINGS

- A. Shop Drawings:
  - 1. Submitted to Engineer for review for limited purpose of checking for conformance with information given and design concept expressed in Contract Documents.
  - 2. After review, provide copies and distribute in accordance with SUBMITTAL PROCEDURES article and for record documents purposes as specified.
- B. Submit number of opaque reproductions Contractor requires, plus two copies which will be retained by Engineer.

#### 1.20 SAMPLES

- A. Samples for Review:
  - 1. Submitted to Engineer for review for limited purpose of checking for conformance with information given and design concept expressed in Contract Documents.
- B. Samples For Selection:
  - 1. Submitted to Engineer for aesthetic, color, or finish selection.
- C. Submit samples to illustrate functional and aesthetic characteristics of Product.

## 1.21 MANUFACTURER'S INSTRUCTIONS

A. When specified in individual specification sections, submit manufacturer printed instructions for delivery, storage, assembly, installation, adjusting, and finishing, in quantities specified for Product Data.

#### 1.22 MANUFACTURER'S CERTIFICATES

- A. When specified in individual specification sections, submit certifications by manufacturer to Engineer, in quantities specified for Product Data.
- B. Indicate material or Product conforms to or exceeds specified requirements. Submit supporting reference data, affidavits, and certifications as appropriate.

## 1.23 QUALITY CONTROL

- A. Monitor quality control over suppliers, manufacturers, Products, services, site conditions, and workmanship, to produce Work of specified quality.
- B. Comply with manufacturer's instructions.
- C. Comply with specified standards as minimum quality for the Work except when more stringent tolerances, codes, or specified requirements indicate higher standards or more precise workmanship.

## 1.24 TOLERANCES

- A. Monitor fabrication and installation tolerance control of installed Products over suppliers, manufacturers, Products, site conditions, and workmanship, to produce acceptable Work. Do not permit tolerances to accumulate.
- B. Comply fully with manufacturer's tolerances.

#### 1.25 REFERENCES

A. Conform to reference standards by date of issue current as of date of Contract Documents

B. When specified reference standards conflict with Contract Documents, request clarification from Engineer before proceeding.

## 1.26 MANUFACTURER'S FIELD SERVICES AND REPORTS

- A. When specified in individual specification sections, require material or Product suppliers or manufacturers to furnish qualified staff personnel to observe site conditions and to initiate instructions when necessary.
- B. Report observations and site decisions or instructions that are supplemental or contrary to manufacturer's written instructions.

#### 1.27 EXAMINATION

- A. Verify existing site conditions and substrate surfaces are acceptable for subsequent Work. Beginning new work means acceptance of existing conditions.
- B. Verify utility services are available, of correct characteristics, and in correct location.

#### 1.28 PREPARATION

- A. Clean substrate surfaces prior to applying next material or substance.
- B. Apply manufacturer required or recommended substrate primer, sealer, or conditioner prior to applying new material or substance in contact or bond.

#### 1.29 TEMPORARY ELECTRICITY

- A. Owner will pay cost of electricity used.
- B. Provide temporary electricity and power outlets for construction operations, connections, branch wiring, distribution boxes, and flexible power cords as required. Do not disrupt Owner's need for continuous service.

#### 1.30 TELEPHONE AND FACSIMILE SERVICE

A. Provide, maintain and pay for telephone service to field office at time of project mobilization.

#### 1.31 TEMPORARY WATER SERVICE

A. Connect to existing water source for construction operations.

#### 1.32 TEMPORARY SANITARY FACILITIES

- A. Provide and maintain required facilities and enclosures. Existing facilities may not be used.
- B. Maintain in clean and sanitary condition.

#### 1.33 FIELD OFFICES AND SHEDS

A. Office: Weather tight, with lighting, electrical outlets, and ventilating equipment.

#### 1.34 PARKING

A. Arrange for temporary parking areas to accommodate construction personnel.

## 1.35 PROGRESS CLEANING AND WASTE REMOVAL

A. Collect and maintain areas free of waste materials, debris, and rubbish. Maintain the site in clean and orderly condition.

#### 1.36 FIRE PREVENTION FACILITIES

- A. Prohibit smoking within building. Owner shall designate area on site where smoking is permitted. Provide approved ashtrays in designated smoking areas.
- B. Establish fire watch for cutting and welding and other hazardous operations capable of starting fires. Maintain fire watch before, during, and after hazardous operations until threat of fire does not exist.
- C. Portable Fire Extinguishers: NFPA 10; 10 pound capacity, 4A-60B: C UL rating.
  - 1. Provide minimum one fire extinguisher in every construction trailer and storage shed.

## 1.37 PROTECTION OF INSTALLED WORK

- A. Protect installed Work and provide special protection where specified in individual specification sections.
- B. Limit traffic and storage upon waterproofed or roofed surfaces.

### 1.38 SECURITY

A. Provide security and facilities to protect Work and existing facilities, and Owner's operations from unauthorized entry, vandalism, or theft.

#### 1.39 REMOVAL OF UTILITIES, FACILITIES, AND CONTROLS

- A. Remove temporary utilities, equipment, facilities, and materials prior to Final Application for Payment review.
- B. Clean and repair damage caused by installation or use of temporary work.
- C. Restore existing facilities used during construction to original condition. Restore permanent facilities used during construction to specified condition.

#### 1.40 PRODUCTS

- A. Products: Means new material, components, and systems forming the Work, but does not include machinery and equipment used for preparation, fabrication, conveying and erection of the Work.
- B. Do not use materials and equipment removed from existing premises, except as specifically identified or allowed by the Contract Documents.

## 1.41 DELIVERY, HANDLING, STORAGE, AND PROTECTION

A. Deliver, handle, store, and protect Products in accordance with manufacturer's instructions.

## 1.42 PRODUCT OPTIONS

- A. Products Specified by Reference Standards or by Description Only: Any Product meeting those standards or description.
- B. Products Specified by Naming One or More Manufacturers: Products of manufacturers named and meeting specifications, or approved equal.
- C. Products Specified by Naming One or More Manufacturers with Provision for Substitutions: Submit request for substitution for manufacturers not named.

## 1.43 SUBSTITUTIONS

A. Instructions to Bidders specify time for submitting requests for Substitutions during bidding period to requirements specified in this section.

#### 1.44 CLOSEOUT PROCEDURES

- A. Submit written certification Contract Documents have been reviewed, Work has been inspected, and Work is complete in accordance with Contract Documents and ready for the Engineer's inspection.
- B. Submit final Application for Payment identifying total adjusted Contract Sum, previous payments, and amount remaining due.

#### 1.45 FINAL CLEANING

- A. Execute final cleaning prior to final inspection.
- B. Clean exterior surfaces exposed to view.
- C. Clean debris from site, roofs, gutters, downspouts, and drainage systems.
- D. Remove waste and surplus materials, rubbish, and construction facilities from site.

## 1.46 PROTECTING INSTALLED CONSTRUCTION

- A. Provide temporary and removable protection for installed products. Control activity in immediate work area to prevent damage.
- B. Protect finished floors, stairs, and other surfaces from traffic, dirt, wear, damage, or movement of heavy objects, by protecting with durable sheet materials.
- C. Limit traffic and storage upon waterproofed or roofed surfaces. When traffic or activity is necessary, obtain recommendations for protection from waterproofing or roofing material manufacturer.

## 1.47 PROJECT RECORD DOCUMENTS

- A. Maintain on site one set of Contract Documents to be utilized for record documents.
- B. Record actual revisions to the Work. Record information concurrent with construction progress.
- C. Specifications: Legibly mark and record at each Product section description of actual Products installed.
- D. Record Documents and Shop Drawings: Legibly mark each item to record actual construction.
- E. Submit documents to Owner with claim for final Application for Payment.

# 1.48 WARRANTIES

- A. Provide duplicate notarized copies.
- B. Execute and assemble transferable warranty documents from subcontractors, suppliers, and manufacturers.
- C. Submit prior to final Application for Payment.

#### **SECTION 05 12 00**

## STRUCTURAL STEEL FRAMING

## PART 2 GENERAL

#### 2.1 SUMMARY

- A. Section Includes:
  - 1. Structural shapes.
  - 2. Channels and angles.
  - 3. Fasteners, connectors, and anchors.

## 2.2 REFERENCES

- A. American Institute of Steel Construction:
  - 1. AISC 303 Code of Standard Practice for Steel Buildings and Bridges.
  - 2. AISC 360 Specification for Structural Steel Buildings.
- B. ASTM International:
  - 1. ASTM A36/A36M Standard Specification for Carbon Structural Steel.
  - 2. ASTM A307 Standard Specification for Carbon Steel Bolts and Studs, 60 000 PSI Tensile Strength.
  - 3. ASTM A992/A992M Standard Specification for Structural Steel Shapes.
- C. American Welding Society:
  - 1. AWS A2.4 Standard Symbols for Welding, Brazing, and Nondestructive Examination.
  - 2. AWS D1.1 Structural Welding Code Steel.

### 2.3 SUBMITTALS

- A. Section 01 33 00 Submittal Procedures: Requirements for submittals.
- B. Shop Drawings:
  - 1. Indicate sizes, locations of structural members, and fasteners.
  - 2. Connections.
- C. Welders Certificates: Certify welders employed on the Work, verifying AWS qualification within previous 12 months.

## 2.4 QUALITY ASSURANCE

- A. Perform Work in accordance with the following:
  - 1. Structural Steel: AISC 303 and.

## 2.5 QUALIFICATIONS

- A. Fabricator: Company specializing in performing Work of this section with minimum years experience with the following current AISC Certification:
  - 1. Standard Steel Building Structures (STD).
- B. Welders and Welding Procedures: AWS D1.1 qualified within previous 12 months.

## **PART 3 PRODUCTS**

- 3.1 STRUCTURAL STEEL
  - A. Channels and Angles: ASTM A36/A36M.
- 3.2 FASTENERS, CONNECTORS, AND ANCHORS
  - A. Bolts: ASTM A307; Grade A or B.
    - 1. Finish: Unfinished. Nuts: ASTM A563 heavy hex type.
    - 2. Finish: Unfinished.
  - B. Washers: ASTM F436; Type 1, circular
    - 1. Finish: Unfinished.

## 3.3 WELDING MATERIALS

A. Welding Materials: AWS D1.1; type required for materials being welded.

### 3.4 ACCESSORIES

- A. Touch-Up Primer: Match shop primer.
- B. Fabricate connections for bolt, nut, and washer connectors.

## 3.5 FINISH

A. Shop prime structural steel members.

## 3.6 SOURCE QUALITY CONTROL AND TESTS

A. Section 01 40 00 - Quality Requirements: Testing, inspection and analysis requirements.

#### **PART 4 EXECUTION**

## 4.1 EXAMINATION

A. Section 01 30 00 - Administrative Requirements: Verification of existing conditions before starting work.

B. Verify bearing surfaces are at correct elevation.

## 4.2 ERECTION

- A. Field weld components indicated on Drawings.
- B. Field connect members with threaded fasteners; tighten to snug tight for bearing type connections.
- C. Do not field cut or alter structural members without approval of Engineer.
- D. After erection, touch up welds and abrasions to match shop finishes.

## 4.3 FIELD QUALITY CONTROL

- A. Section 01 40 00 Quality Requirements: Field inspecting, testing, adjusting, and balancing.
- B. Bolted Connections: Inspect in accordance with AISC 303.
  - 1. Visually inspect all bolted connections.
  - 2.
- C. Welding: Inspect welds in accordance with AWS D1.1.
  - 1. Certify welders and conduct inspections and tests as required. Record types and locations of defects found in work. Record work required and performed to correct deficiencies.
  - 2. Visually inspect all welds.
- D. Correct defective bolted connections and welds.

#### **SECTION 05 51 00**

## METAL STAIRS AND LADDERS

## PART 5 GENERAL

## 5.1 SUMMARY

- A. Section includes steel stair frame of structural sections, with open risers; stair treads; integral balusters and handrailing.
- B. Related Sections:
  - 1. Section: Execution requirements for placement of metal anchors specified in this section.

#### 5.2 REFERENCES

- A. ASTM International:
  - 1. ASTM A36/A36M Standard Specification for Carbon Structural Steel.
  - 2. ASTM A123/A123M Standard Specification for Zinc (Hot-Dip Galvanized) Coatings on Iron and Steel Products.
  - 3. ASTM F1554 Standard Specification for Anchor Bolts, Steel, 36, 55, and 105-ksi Yield Strength.
- B. American Welding Society:
  - 1. AWS A2.4 Standard Symbols for Welding, Brazing, and Nondestructive Examination.
  - 2. AWS D1.1 Structural Welding Code Steel.

## 5.3 SUBMITTALS

A. Section 01 33 00 - Submittal Procedures: Submittal requirements.

#### 5.4 FIELD MEASUREMENTS

A. Verify field measurements prior to fabrication.

## **PART 6 PRODUCTS**

#### 6.1 METAL LADDERS

- A. Suppliers:
  - 1. Industrial Ladder & Supply, models F9WC1 and F4WC1
  - 2. Substitutions: Section 01 60 00 Product Requirements

## PART 7 EXECUTION

## 7.1 EXAMINATION

- A. Section 01 30 00 Administrative Requirements: Coordination and project conditions.
- B. Verify field conditions are acceptable and are ready to receive work.

## 7.2 PREPARATION

A. Supply items required to be embedded in masonry with setting templates.

## 7.3 INSTALLATION

- A. Install components plumb and level, accurately fitted, free from distortion or defects.
- B. Install anchors, required for connecting ladder to structure.

# 7.4 ERECTION TOLERANCES

- A. Section 01 40 00 Quality Requirements: Tolerances.
- B. Maximum Variation From Plumb: 1/4 inch.

## SECTION 07 01 50

## MAINTENANCE OF MEMBRANE ROOFING

## PART 8 GENERAL

## 8.1 SUMMARY

- A. Section Includes:
  - 1. Partial removal of existing roofing system in preparation for new roof membrane system.

## **PART 9 PRODUCTS**

## 9.1 COMPONENTS

A. Temporary Protection: Sheet polyethylene; furnish weights to retain sheeting in position.

## PART 10 EXECUTION

## 10.1 EXISTING CONSTRUCTION

- A. Remove metal counter flashings.
- B. Remove damaged portions of roofing membrane.
- C. Remove damaged insulation and fasteners, cant strips, blocking, and flashing.
- D. Repair damaged concrete deck materials.

## 10.2 SCHEDULES

A. Where indicated on the drawings: Remove flashings, membrane, insulation and underlayment, in preparation for new protected membrane roof system specified in Section 07 53 03.

#### **SECTION 07 53 03**

## ELASTOMERIC MEMBRANE ROOFING - FULLY ADHERED

## PART 11 GENERAL

#### 11.1 SUMMARY

A. Section includes: insulation, membrane roofing, base flashings, cant strips and Counterflashings.

## B. Related Sections:

- 1. Section 06 10 53 Miscellaneous Rough Carpentry: Wood nailers and cant strips.
- 2. Section 07 01 50 Maintenance of Membrane Roofing.
- 3. Section 07 62 00 Sheet Metal Flashing and Trim: Counterflashing and.
- 4. Section 07 71 00 Roof Specialties: Counterflashing and.
- 5. Section 22 14 00 Facility Storm Drainage: Roof drains sumps hoppers.

### 11.2 REFERENCES

#### A. ASTM International:

- 1. ASTM C79/C79M Standard Specification for Gypsum Sheathing Board.
- 2. ASTM C208 Standard Specification for Cellulosic Fiber Insulating Board.
- 3. ASTM C1289 Standard Specification for Faced Rigid Cellular Polyisocyanurate Thermal Insulation Board.
- 4. ASTM D412 Standard Test Methods for Vulcanized Rubber and Thermoplastic Elastomers-Tension.
- 5. ASTM D624 Standard Test Method for Tear Strength of Conventional Vulcanized Rubber and Thermoplastic Elastomers.
- 6. ASTM D746 Standard Test Method for Brittleness Temperature of Plastics and Elastomers by Impact.
- 7. ASTM D1004 Standard Test Method for Tear Resistance (Graves Tear) of Plastic Film and Sheeting.
- 8. ASTM D4637 Standard Specification for EPDM Sheet Used in Single-Ply Roof Membrane.
- 9. ASTM E96/E96M Standard Test Methods for Water Vapor Transmission of Materials.
- 10. ASTM E108 Standard Test Methods for Fire Tests of Roof Coverings.
- 11. ASTM E119 Standard Test Methods for Fire Tests of Building Construction and Materials.

## B. FM Global:

1. FM DS 1-28 - Wind Loads to Roof Systems and Roof Deck Securement.

## C. National Roofing Contractors Association:

1. NRCA - The NRCA Roofing and Waterproofing Manual.

#### D. Single Ply Roofing Institute:

1. SPRI ES-1 - Wind Design Standard for Edge Systems Used with Low Slope Roofing Systems.

- E. Underwriters Laboratories Inc.:
  - 1. UL Fire Resistance Directory.
  - 2. UL 790 Tests for Fire Resistance of Roof Covering Materials.
  - 3. UL 1897 Uplift Tests for Roof Covering Systems.

## 11.3 SYSTEM DESCRIPTION

A. Elastomeric Sheet Membrane Conventional Roofing System: One ply membrane system with sheathing, insulation, and adhesive applied membrane.

## 11.4 DESIGN REQUIREMENTS

A. Low Slope Membrane Roof Edge Securement: Conform to SPRI ES-1 for wind speeds determined from the Massachusetts State Building Code.

# 11.5 SUBMITTALS

- A. Section 01 33 00 Submittal Procedures: Submittal procedures.
- B. Shop Drawings: Indicate setting plan for tapered insulation, joint and termination detail conditions, conditions of interface with other materials.
- C. Product Data: Submit characteristics on membrane materials, adhesives, seaming materials, flashing materials, and insulation.
- D. Manufacturer's Installation Instructions: Submit special precautions required for seaming membrane.
- E. Manufacturer's Certificate: Certify Products meet or exceed specified requirements.
- F. Manufacturer's Field Reports: Indicate procedures followed; ambient temperatures, humidity, and wind velocity during application.

# 11.6 QUALITY ASSURANCE

- A. Perform Work in accordance with NRCA Roofing and Waterproofing Manual.
- B. Roof Assembly Fire Classification: Minimum Class B when tested in accordance with ASTM E108 or UL 790.
  - 1. Roof Assembly with Foam Insulation: Passes FM 4450 or UL 1256.
- C. Surface Burning Characteristics:
  - 1. Foam Insulation: Maximum 75/450 flame spread/smoke developed index when tested in accordance with ASTM E84.
- D. Apply label from agency approved by authority having jurisdiction to identify each roof assembly component.
- E. Perform Work in accordance with Massachusetts' standard.
- F. Maintain one copy of each document on site.

#### 11.7 QUALIFICATIONS

- A. Manufacturer: Company specializing in manufacturing products specified in this section with minimum three years experience.
- B. Applicator: Company specializing in performing Work of this section with minimum three years experience and approved by manufacturer.

## 11.8 PRE-INSTALLATION MEETINGS

- A. Section 01 30 00 Administrative Requirements: Preinstallation meetings.
- B. Convene minimum one week prior to commencing Work of this section.
- C. Review preparation and installation procedures and coordinating and scheduling required with related Work.

## 11.9 DELIVERY, STORAGE, AND HANDLING

- A. Section 01 60 00 Product Requirements: Requirements for transporting, handling, storing, and protecting products.
- B. Deliver products in manufacturer's original containers, dry, undamaged, with seals and labels intact.
- C. Store products in weather protected environment, clear of ground and moisture.
- D. Protect foam insulation from direct exposure to sunlight.

## 11.10 ENVIRONMENTAL REQUIREMENTS

- A. Section 01 60 00 Product Requirements: Environmental conditions affecting products on site.
- B. Do not apply roofing membrane during inclement weather ambient temperatures below 45 degrees F or above 120 degrees F without proper weather protection.
- C. Do not apply roofing membrane to damp or frozen deck surface or when precipitation is expected or occurring.
- D. Do not expose materials vulnerable to water or sun damage in quantities greater than can be weatherproofed during same day.

#### 11.11 COORDINATION

- A. Section 01 30 00 Administrative Requirements: Coordination and project conditions.
- B. Coordinate Work with installation of associated roof penetrations and metal flashings, as Work of this section proceeds.

#### 11.12 WARRANTY

- A. Section 01 70 00 Execution and Closeout Requirements: Requirements for warranties.
- B. Furnish 15 year manufacturer's warranty including coverage of materials and installation and resulting damage to building resulting from failure to resist penetration of moisture.

#### **PART 12 PRODUCTS**

#### 12.1 SINGLE PLY ROOFING - FULLY ADHERED

- A. Manufacturers:
  - 1. Carlisle SynTec Systems
  - 2. Celotex Corporation
  - 3. Firestone Building Products Co.
  - 4. Johns Manville
  - 5. Sarnafil, Inc.
  - 6. Substitutions: Section 01 60 00 Product Requirements

#### 12.2 COMPONENTS

- A. Membrane: ASTM D4637; Type IIEPDM; conforming to the following criteria:
- B. Seaming Materials: As recommended by membrane manufacturer.
- C. Membrane Application:
  - 1. Apply primer.
  - 2. Apply adhesive per manufacturer's instructions.
  - 3. Roll out membrane, free from air pockets, wrinkles, or tears. Firmly press sheet into place without stretching.
  - 4. Bond sheet to substrate except those areas directly over or within 3 inches of control or expansion joint.
  - 5. Overlap edges and ends and seal by solvent welding or contact adhesive, minimum 3 inches. Seal permanently waterproof.
  - 6. Shingle joints on sloped substrate in direction of drainage. Apply joint tape and seal.
  - 7. Extend membrane up cant strips minimum of 8 inches onto vertical surfaces.
  - 8. Seal membrane around roof penetrations.
- D. Flashings And Accessories:
  - 1. Apply flexible flashings to seal membrane to vertical elements.
  - 2. Secure to nailing strips at 4 inches oc and reglets.
  - 3. Coordinate installation of roof drains sumps and related flashings.
  - 4. Seal flashings and flanges of items penetrating membrane.
  - 5. Install walkway pads. Space pad joints to permit drainage.

## 12.3 FIELD QUALITY CONTROL

A. Section 01 40 00 - Quality Requirements 01 70 00 - Execution and Closeout Requirements: Field inspecting, testing, adjusting, and balancing.

## 12.4 CLEANING

- A. Section 01 70 00 Execution and Closeout Requirements: Final cleaning.
- B. In areas where finished surfaces are soiled by Work of this section, consult manufacturer of surfaces for cleaning advice and conform to their instructions.
- C. Repair or replace defaced or disfigured finishes caused by Work of this section.

# 12.5 PROTECTION OF INSTALLED CONSTRUCTION

- A. Section 01 70 00 Execution and Closeout Requirements: Protecting installed construction.
- B. Protect building surfaces against damage from roofing Work.
- C. Where traffic must continue over finished roof membrane, protect surfaces.

## **SECTION 07 62 00**

#### SHEET METAL FLASHING AND TRIM

## PART 13 GENERAL

#### 13.1 SUMMARY

- A. Section includes flashings and counterflashings and fabricated sheet metal items.
  - 1. Provide reglets and accessories.

#### 13.2 REFERENCES

- A. ASTM International:
  - 1. ASTM A755/A755M Standard Specification for Steel Sheet, Metallic Coated by the Hot-Dip Process and Prepainted by the Coil-Coating Process for Exterior Exposed Building Products.

## 13.3 DESIGN REQUIREMENTS

A. Sheet Metal Flashings: Conform to the following criteria of SMACNA "Architectural Sheet Metal Manual."

## 13.4 SUBMITTALS

- A. Section 01 33 00 Submittal Procedures: Submittal procedures.
- B. Shop Drawings: Indicate material profile, jointing pattern, jointing details, fastening methods, flashings, terminations, and installation details.
- C. Product Data: Submit data on manufactured components metal types, finishes, and characteristics.
- D. Samples:
  - 1. Submit two samples illustrating metal finish color.

## 13.5 QUALIFICATIONS

A. Fabricator and Installer: Company specializing in sheet metal work with minimum three years experience.

## 13.6 DELIVERY, STORAGE, AND HANDLING

- A. Section 01 60 00 Product Requirements: Product storage and handling requirements.
- B. Stack material to prevent twisting, bending, and abrasion, and to provide ventilation. Slope metal sheets to ensure drainage.
- C. Prevent contact with materials causing discoloration or staining.

#### 13.7 COORDINATION

- A. Section 01 30 00 Administrative Requirements: Coordination and project conditions.
- B. Coordinate with Work of Section 03 10 00

## **PART 14 PRODUCTS**

## 14.1 SHEET METAL FLASHING AND TRIM

A. Pre-Finished Galvanized Steel Sheet: ASTM A755/A755M; structural steel sheet, G90 zinc coating; 0.024 inch thick core steel, shop pre-coated with acrylic two coat top coat; color as scheduled color to match existing.

## 14.2 ACCESSORIES

- A. Fasteners: Same material and finish as flashing metal, with soft neoprene washers.
- B. Underlayment: ASTM D226; Type I, No. 15 Type II, No. 30 unperforated asphalt felt.
- C. Primer: Zinc molybdate Galvanized iron type.
- D. Protective Backing Paint: Zinc molybdate alkyd. FS TT-C-494, Bituminous.
- E. Sealant: Type E butyl sealant specified in Section 07 90 00.
- F. Reglets: Recessed type, galvanized steel

#### 14.3 FABRICATION

- A. Form sections shape indicated on Drawings, accurate in size, square, and free from distortion or defects.
- B. Fabricate cleats of same material as sheet metal, interlocking with sheet.
- C. Form pieces in longest possible lengths.
- D. Hem exposed edges on underside 1/2 inch; miter and seam corners.
- E. Form material with flat lock seams, except where otherwise indicated. At moving joints, use sealed lapped, bayonet-type or interlocking hooked seams.
- F. Fabricate corners from one piece with minimum 18 inch long legs; seam for rigidity, seal with sealant.
- G. Fabricate vertical faces with bottom edge formed outward 1/4 inch and hemmed to form drip.
- H. Seal metal joints.

## **PART 15 EXECUTION**

## 15.1 EXAMINATION

- A. Section 01 30 00 Administrative Requirements: Coordination and project conditions.
- B. Verify roof openings, curbs, pipes, sleeves, ducts, and vents through roof are solidly set, reglets in place, and nailing strips located.
- C. Verify roofing termination and base flashings are in place, sealed, and secure.

## 15.2 PREPARATION

- A. Install starter and edge strips, and cleats before starting installation.
- B. Install surface mounted reglets to lines and levels indicated on Drawings. Seal top of reglets with sealant.

## 15.3 INSTALLATION

- A. Secure flashings in place using concealed fasteners. Use exposed fasteners only where permitted.
- B. Fit flashings tight in place. Make corners square, surfaces true and straight in planes, and lines accurate to profiles.
- C. Seal metal joints watertight.

## 15.4 FIELD QUALITY CONTROL

- A. Section 01 40 00 Quality Requirements 01 70 00 Execution and Closeout Requirements: Field inspecting, testing, adjusting, and balancing.
- B. Inspection will involve surveillance of Work during installation to ascertain compliance with specified requirements.

#### **SECTION 07 90 00**

## JOINT PROTECTION

#### PART 16 GENERAL

#### 16.1 SUMMARY

A. Section includes sealants and joint backing, and accessories.

## 16.2 REFERENCES

#### A. ASTM International:

- 1. ASTM C920 Standard Specification for Elastomeric Joint Sealants.
- 2. ASTM C1193 Standard Guide for Use of Joint Sealants.

## 16.3 SUBMITTALS

- A. Section 01 33 00 Submittal Procedures: Submittal procedures.
- B. Products Data: Submit data indicating sealant chemical characteristics, performance criteria, substrate preparation, limitations, and color availability.
- C. Manufacturer's Installation Instructions: Submit special procedures, surface preparation, and perimeter conditions requiring special attention.
- D. Warranty: Include coverage for installed sealants and accessories failing to achieve, watertight seal, exhibit loss of adhesion or cohesion, and sealants which do not cure.

## 16.4 QUALIFICATIONS

- A. Manufacturer: Company specializing in manufacturing products specified in this section with minimum three years experience.
- B. Applicator: Company specializing in performing Work of this section with minimum three years experience.

## 16.5 ENVIRONMENTAL REQUIREMENTS

- A. Section 01 60 00 Product Requirements.
- B. Maintain temperature and humidity recommended by sealant manufacturer during and after installation.

## 16.6 COORDINATION

- A. Section 01 30 00 Administrative Requirements: Coordination and project conditions.
- B. Coordinate Work with sections referencing this section.

#### **PART 17 PRODUCTS**

## 17.1 JOINT SEALERS

- A. Manufacturers:
  - 1. Dow Corning Corp.
  - 2. GE Silicones.
  - 3. Pecora Corp.
  - 4. Sika Corp.
  - 5. Substitutions: Section 01 60 00 Product Requirements.
- B. Products Description:
  - 1. High Performance General Purpose Exterior (Nontraffic) Sealant Silicone, Polyurethane, or Polysulfide; ASTM C920, Grade NS, Class 25, Uses M, G, and A; single or multi- component.
    - a. Color: Standard colors matching finished surfaces.
    - b. Applications: Use for:
  - 1) Control, expansion, and soft joints in masonry.
  - 2) Joints between concrete and other materials.
  - 3) Other exterior nontraffic joints for which no other sealant is indicated.

#### 17.2 CLEANING

- A. Section 01 70 00 Execution and Closeout Requirements: Final cleaning.
- B. Clean adjacent soiled surfaces.

## 17.3 PROTECTION OF INSTALLED CONSTRUCTION

- A. Section 01 70 00 Execution and Closeout Requirements: Protecting installed construction.
- B. Protect sealants until cured.

## SECTION 22 14 00

## STORM WATER DRAINAGE

## PART 1 - GENERAL

#### 1.1 DESCRIPTION

A. Addition to an existing storm drainage system, including new roof drain, piping and all necessary accessories to connect to existing system as designated in this section.

#### 1.2 RELATED SECTION

A. 22 00 00 Roof Drain Specifications

## 1.4 REFERENCES

- A. American National Standards Institute (ANSI):
- B. American Society for Testing and Materials (ASTM): A536-84(R1999) E1 Ductile Iron Castings
- C. C564-03 Rubber Gaskets for Cast Iron Soil Pipe and Fittings
- D. 780 CMR 29 Massachusetts State Plumbing Code

## PART 2 - PRODUCTS

## 2.1 STORM WATER DRAIN PIPING

- A. Cast Iron Pipe and Fittings: Used to connect new roof drain to existing roof drain system. Pipe shall be bell and spigot, modified hub, or plain end (no-hub) as required to connect to existing system.
  - 1. Material, (Pipe and Fittings): ASTM A74, C1SP1-301, Service Class.
  - 2. Joints: Provide any one of the following types to suit pipe furnished.
  - a. Mechanical: Meet the requirements and criteria for pressure, leak, deflection and shear tests as outlined in Factory Mutual No. 1680 for Class 1 couplings.
    - Stainless steel clamp type coupling of elastomeric sealing sleeve, ASTM
       C564 and a Series 300 stainless steel shield and clamp assembly. Sealing

- sleeve with center-stop to prevent contact between pipes/fittings being joined shall be marked ASTM C564.
- 2) Cast Iron coupling with neoprene gasket and stainless steel bolts and nuts.
- b. Adapters: Where service weight pipe is connected to extra heavy pipe and extra heavy fittings of chair carriers, provide adapters or similar system to make tight, leak proof joints.

## 2.2 CLEANOUTS

- A. Same size as the pipe, up to 4 inches; not less than 4 inches for larger pipe. Cleanouts shall be easily accessible and shall be watertight.
- B. In horizontal runs above grade, cleanouts shall consist of tapered screw plug in fitting or caulked/no hub cast iron ferrule. Plain end (no-hub) piping in interstitial space or above ceiling may use plain end (no-hub) blind plug and clamp.

## 2.3 ROOF DRAINS AND CONNECTIONS

- A. Roof Drains: Cast iron with clamping device for making watertight connection. Free openings through strainer shall be twice area of drain outlet. Provide integral no-hub, soil pipe gasket or threaded outlet connection.
- B. Beehive or dome shaped strainer with integral flange not less than 12 inches in diameter. For insulated roofs, provide a roof drain with an adjustable drainage collar, which can be raised or lowered to meet required insulation heights, sump receiver and deck clamp.

## PART 3 - EXECUTION

#### 3.1 INSTALLATION

- A. General: Comply with the Massachusetts State Plumbing Code 780 CMR 29, and 248 CMR, Plumbers and Gas Fitters Regulations and the following:
  - 1. Install branch piping from the existing piping system and connect to existing pipe.

- 2. Pipe shall be round and straight. Cutting shall be done with proper tools. Pipe shall be reamed to full size after cutting.
- 3. All pipe runs shall be laid out to avoid interference with existing work.
- 4. Pipe Hangers, Supports And Accessories:
  - a. All piping shall be supported per of the code requirements.
  - b. Hanger Rods: Mild, low carbon steel, fully threaded or Threaded at each end with two removable nuts at each end for positioning rod and hanger and locking each in place.
  - c. Miscellaneous Materials: As required, for proper installation of hangers, supports and accessories. If the vertical distance exceeds 20 feet for cast iron pipe additional support shall be provided in the center of that span. Provide all necessary auxiliary steel to provide that support.

## B. Piping shall conform to the following:

1. Storm Water Drain:

Pipe Size	Minimum Pitch
3 inches and	1 : 50 (1/4" to the foot).
smaller	
4 inches and larger	1 : 100 (1/8" to the foot).

End of Section.

#### **SECTION**

## **ROOF DRAIN SPECIFICATIONS**

## PART 18 GENERAL

## 1.01 SECTION INCLUDES

A. Supply and installation of roof accessories, including: 1. Roof drain.

#### 1.02 RELATED SECTIONS

- A. Section 075303 Elastomeric Membrane Roofing
- B. Section 15413 Drainage Waste and Vent Piping Cast Iron and Copper
- C. Section 22 14 00 Facility Storm Drainage

#### 1.03 REFERENCES

- A. ANSI A112.21.2 Roof Drains
- C. NRCA (National Roofing Contractor's Association)
- D. SPRI (Single Ply Roofing Institute)

## 1.04 SUBMITTALS

- A. Manufacturer's descriptive literature for each product, including section or other type details.
  - B. Manufacturer's written installation instructions.

## 1.05 QUALITY ASSURANCE

A. Roof accessories manufacturer to have minimum 5 year documented experience in the design and fabrication of roofing specialties and accessories.

## 1.06 SPECIAL WARRANTY

A. Warrant products installed under this section of work to be free of leaks and defects in materials and/or manufacture for a period of 20 years when installed in accordance with the manufacturer's written instructions.

## **PART 2 PRODUCTS**

## 2.01 MANUFACTURER

- A. Provide products similar in size and type to existing roof drains approved by the engineer, based upon:
  - 1. 20 year warranty against leaks and defects in materials and/or manufacture, as applicable;
  - 2. compliance with ANSI A112.21.2 Roof Drains standard;
  - 3. maintenance free design;
  - 4. Retro-fit sealer; where applicable
  - 5. Written installation instructions.

#### 2.02 MANUFACTURED UNITS

Drain for 3" leader size; with: vandal resistant cast aluminum dome with removable access gate and clamping ring c/w stainless steel spacer nuts to increase water flow;

#### PART 3 EXECUTION

#### 3.01 EXAMINATION

- A. Report to the Contractor in writing, defects of work prepared by other trades and other unsatisfactory site conditions.
- B. Verify site dimensions.
- C. Commencement of work will imply acceptance of prepared work.
- D. Set deck flange in layer of specified membrane adhesive apply adhesive to top of flange and clamp membrane to the deck flange using the clamping ring supplied by the drain manufacturer. Install dome assembly using 3/8" stainless steel nuts provided. Ensure the membrane at the rainwater leader has been trimmed back to provide specified water drainage.

# 3.03 FIELD QUALITY CONTROL

A. Comply with the requirements of Section 01 00 00 Quality Control.

### 3.04 ADJUSTMENTS

A. Verify that all manufactured units have been installed in accordance with specifications and details, and will function as intended. Adjust any items where necessary to ensure proper operation.

## 3.05 CLEANING

- A. Clean manufactured units using materials and methods approved by manufacturer.
- B. Do not use cleaners or techniques which could impair performance of the roofing system.

End of Section.